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Worldview Conflict and Prejudice

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Abstract

People are motivated to protect their worldviews. One way to protect one's worldviews is through prejudice towards worldview-dissimilar groups and individuals. The traditional hypothesis predicts that people with more traditional and conservative worldviews will be more likely to protect their worldviews with prejudice than people with more liberal and progressive worldviews, whereas the worldview conflict hypothesis predicts that people with both traditional and liberal worldviews will protect their worldviews through prejudice. We review evidence across both political and religious domains, as well as evidence using disgust sensitivity, Big Five personality traits, and cognitive ability as measures of individual differences historically associated with prejudice. We discuss four core findings that are consistent with the worldview conflict hypothesis: (1) The link between worldview conflict and prejudice is consistent across worldviews. (2) The link between worldview conflict and prejudice is found across various expressions of prejudice. (3) The link between worldview conflict and prejudice is found in multiple countries. (4) Openness, low disgust sensitivity, and cognitive ability - traits and individual differences historically associated with less prejudice - may in fact also show evidence of worldview conflict. We discuss how worldview conflict may be rooted in value dissimilarity, identity, and uncertainty management, as well as potential routes for reducing worldview conflict.

Worldview Conflict and Prejudice

Many perspectives in social psychology assume that people are motivated to protect the validity and vitality of their views, from their self-views to their worldviews (Greenwald, 1980; Kunda, 1990; Mercier & Sperber, 2011; Mutz, 2007; Pyszczynski & Greenberg, 1987). People with negative self-views prefer to hear negative feedback about themselves, whereas people with positive self-views prefer to hear positive feedback (Swann, 2011). Similarly, people search for information, interpret that information, and otherwise engage with it in ways that confirm their prior attitudes and worldviews (Frimer, Skitka, & Motyl, 2017; Hart et al., 2009; Taber & Lodge, 2006). When those views are not confirmed, people feel angry (Brandt, Crawford, & Van Tongeren, 2019) and show physiological markers of stress (Townsend, Major, Sawyer, & Mendes, 2010).

Worldviews might be one type of view particularly important for people to protect. They are a set of values and beliefs that describe how the world should and does work (for discussions of worldview as a construct in psychology, see Johnson, Hill, & Cohen, 2011; Koltko-Rivera, 2004). In this way, they provide individuals and groups with schemas to interpret and navigate their social worlds (Janoff-Bulman, 1989). Worldviews may be relevant to a number of domains, including politics (e.g., a socialist worldview), religion (e.g., a Catholic worldview), and combinations of the two (e.g., a liberation theology worldview). In principle, everyone has a worldview (or potentially multiple worldviews) because they have schemas for interpreting their world. In practice, the worldviews that attract the attention of psychology researchers are shared, to some degree, with a larger group of people (e.g., the 26% of Americans who identify as liberals; Saad, 2019). Although everyone has a worldview to some degree, this does not mean that everyone has a coherent worldview that is also the object of

psychological study (e.g., not everyone has a coherent political worldview; Converse, 1964; Kinder & Kalmoe, 2018).

One way that people can defend their worldview is by derogating and denigrating individuals and groups who disagree with their worldview, or otherwise represent a threat to the ideas and values that the worldview represents. Worldview conflict is when people encounter information that conflicts and disagrees with their worldview. Although this could be any kind of worldview conflicting information (e.g., an economic policy with worldview-inconsistent consequences), we study how worldview conflict is related to prejudice. And so, we typically examine conditions when another person or group holds conflicting worldviews. Worldview conflict inspired prejudice might include describing a politician with ideas you don't like as "insane" and as a person "who doesn't seem to know much about anything." However, it can also include dislike, dehumanization, social distance, and other denigrations of the group and its members. Not only do these responses to worldview-dissimilar groups derogate the group and its ideas, it also may serve to improve one's own self-views or group-views, just as other forms of prejudice can boost self-esteem (Fein & Spencer, 1997).

We study worldview conflict as it manifests across three broad measures. *Prejudice* is the negative evaluation of a group or its members based on group membership (Brown, 2010; Crandall, Eshleman, & O'Brien, 2002). This definition focuses on the clear psychological issue at stake, negative evaluations. We typically focus on prejudice as it is assessed using two common measures of prejudice in the literature (Correll, Judd, Park, & Wittenbrink, 2010): feeling thermometers that ask participants to rate how cold/disliking or warm/liking they feel towards a particular group, or measures of social distance which ask participants how socially near or far they would accept particular groups in their lives (e.g., as friends or coworkers). We

also assess such evaluations with other measures, such as negative stereotypes, emotions, or implicit associations.

A particularly pernicious form of prejudice is *dehumanization*, where people assign non-human traits and descriptions to human groups and individuals (Haslam, 2006; Haslam & Loughnan, 2014; Kteily, Bruneau, Waytz, & Cotterill, 2015). Although this might seem a particularly extreme form of dislike (and is indeed correlated with standard measures of prejudice), it appears to predict relevant behaviors above and beyond typical measures of prejudice (e.g., Kteily et al., 2015). Dehumanization measures include those involved attributing non-human (i.e. non-complex) traits (Crawford, Modri, & Motyl, 2013; Haslam & Loughnan, 2014) and those explicitly comparing human groups to insects (e.g., Epley, Waytz, Akalis, & Cacioppo, 2008) or other animals (e.g., Kteily et al., 2015).

Prejudice is theoretically interesting, in part, because it may be associated with *harmful behaviors and intentions*. This might include measures of a willingness to discriminate (Wetherell et al., 2013), political intolerance (Gibson, 2006), or outcomes of economic games (e.g., dictator game; Crawford, Brandt, Inbar, Chambers, & Motyl, 2017; Engel, 2011).¹ These measures capture the willingness to harm someone, including the denial of rights and the destruction of property, based on their group membership, as well as people's actual behaviors that harm others.

¹ Political intolerance is more often studied by political scientists (Gibson, 2006). There is a tradition in political science of measuring intolerance using the least like group paradigm (Sullivan, Piereson, & Marcus, 1979), where participants complete intolerance items about a single group they dislike the most. This measure, however, does not work for our purposes because testing worldview conflict requires that we test intolerance for both worldview upholding and worldview violating groups. Therefore, we use intolerance items that are directed at a variety of specific groups (e.g., Crawford & Pilanski, 2014).

In the following sections we will compare the traditional and worldview conflict perspectives on the association between political worldviews and prejudice. Then, we extend these ideas to understand the link between religious fundamentalism and prejudice. These studies reviewed suggest that both liberals and conservatives, as well as fundamentalists and non-fundamentalists, express prejudice towards groups with dissimilar worldviews. This is surprising because liberal and progressive worldviews are often associated with traits (e.g., Openness to experience) that should make them more open to different perspectives. Therefore, we review evidence suggesting that many traits typically associated with tolerance may also show signs of worldview conflict. In the final sections of the chapter, we discuss potential mechanisms and methods of reducing worldview conflict, as well as how research on worldview conflict and prejudice is related to larger theoretical debates on ideological differences and similarities.

Comparing the Traditional and the Worldview Conflict Perspectives

The central question that we have examined with our research program is whether people with more traditional and conservative worldviews experience more worldview conflict than people with more progressive and liberal worldviews. This question is important practically because it gives us insight into the nature of political polarization and conflicts over value-laden beliefs. It is important theoretically because it gives insight into whether or not the processes underlying worldview conflict are similar or different across worldviews. This is, in turn, relevant to larger debates about the similarities and differences of psychological processes between adherents of different worldviews.

There are multiple perspectives that can be leveraged to predict whether people with more traditional and conservative worldviews experience more worldview conflict than people with more progressive and liberal worldviews. Perspectives ranging from conservatism as

motivated cognition (Jost, Glaser, Kruglanski, & Sulloway, 2003), dual-process theories of prejudice (Duckitt & Sibley, 2009), social identity theory (Brown, 2000), moral foundations theory (Graham, Haidt, Koleva, Motyl, Iyer, Wojcik, & Ditto, 2013), and the defense of psychological threats (Jonas et al., 2014) all touch on psychological and social processes that likely contribute to worldview conflict. When it comes to predicting whether liberals or conservatives are more likely to engage in worldview conflict, we can make the case for two different broad hypotheses, the *traditional hypothesis* and the *worldview conflict hypothesis*.

Traditional Hypothesis

The traditional hypothesis predicts that people with more traditional and conservative worldviews will engage in more worldview conflict than people with more progressive and liberal worldviews. The case for the traditional hypothesis starts with the findings that conservatives (i.e., people with more traditional worldviews) are more likely to be intolerant of ambiguity (Sidanius, 1978), prefer order and structure (Kimmelmeier, 1997), be sensitive to threat (Oxley et al., 2008), and perceive the world as a threatening place (Sibley, Wilson, & Duckitt, 2007) than liberals (i.e., people with more progressive worldviews). Research also indicates that conservatives are also less open to experience (Peterson, Smirles, & Wentworth, 1997), intelligent (Hodson & Busseri, 2012), and cognitively complex (Sidanius, 1985) than liberals (for meta-analyses addressing these questions, see Jost, Glaser, Kruglanski, & Sulloway, 2003; Jost, Stern, Rule, & Sterling, 2017; Onraet, Van Hiel, Dhont, Hodson, Schittekatte, & De Pauw, 2015; Onraet, Van Hiel, Dhont, & Pattyn, 2013; Sibley & Duckitt, 2008; Sibley, Osborne, & Duckitt, 2012; Van Hiel, Onraet, & De Pauw, 2010; for narrative reviews, see Hibbing, Smith, & Alford, 2014; Jost, 2017). When a perceiver encounters a target with a different worldview, this may increase the necessity for cognitive complexity in understanding that target's

worldview. This may increase the perceiver's feelings of ambiguity and violate their sense of order. For people who do not like to think complexly and who are bothered more by ambiguity and less order, encountering people with differing worldviews may then be particularly aversive and inspire more prejudice (for additional theoretical detail, see Dhont & Hodson, 2014; Hodson & Dhont, 2015). And so, these dispositional correlates are all likely to prime the pump for prejudice among conservatives and reduce the likelihood of prejudice expression among liberals. This is consistent with evidence that liberals are more motivated to appear unprejudiced (Crandall & Eshleman, 2003; Plant & Devine, 1998), even toward ideologically dissimilar groups (Crawford, Kay, & Duke, 2015).

Consistent with the traditional hypothesis, the scholarly literature is filled with examples of conservatives expressing more prejudice, dehumanization, and intolerance than liberals. Conservatives, for example, score higher on measures of racism (Sears & Henry, 2003), anti-gay prejudice (Terrizzi, Shook, & Ventis, 2010), anti-trans prejudice (Hoffarth & Hodson, 2018), anti-immigrant prejudice (Van Hiel, Pandelaere, & Duriez, 2004), sexism (Christopher & Mull, 2006), and anti-poor people prejudice (Zucker & Weiner, 1993) than do liberals (for a meta-analysis, see Sibley & Duckitt, 2008). In fact, conservatives express more generalized prejudice – a dispositional tendency to express prejudice towards a wide variety of groups – than do liberals (McFarland, 2010). This set of findings is also consistent with work from moral foundations theory (Graham et al., 2013), which suggests that conservatives compared to liberals put a moral premium on loyalty to their own group and purity concerns, and put less of a moral premium on issues related to caring for others and treating others fairly.

The case for religiosity follows a similar logical structure as the case for political ideology. People with strong religious beliefs, especially orthodox or fundamentalist religious

beliefs, tend to score higher on a number of dispositional indicators of closed-mindedness. This includes scoring higher on measures of need for closure (Brandt & Reyna, 2010; Saroglou, 2002a), need for structure (Hill, Cohen, Terrell, & Nagoshi, 2010), and authoritarian dispositions (Brandt & Reyna, 2014; Hunsberger, 1995; Laythe, Finkel, & Kirkpatrick, 2001), as well as lower on measures of Openness to Experience (Saroglou, 2002b), creativity (Saroglou, 2002c), and need for cognition (Hill et al., 2010) than their non-religious counterparts. At the same time, religions tend to encourage love and charity for fellow humans (Schumann, McGregor, Nash & Ross, 2014), consistent with the finding that religious people score higher on benevolence values (Saroglou, Delpierre, & Dernelle, 2004) and prosocial value orientation (Malka, Soto, Cohen, & Miller, 2011). Combining these two observations, scholars often observe that religious people will be more charitable towards people who uphold their values, or maybe even people with unspecified group affiliations; however, the same people will tend to be less generous towards people who violate their values (e.g., feminists; Blogowska & Saroglou, 2011). Similarly, religious fundamentalism is associated with prejudice towards a variety of groups, including single mothers (Jackson & Esses, 1997), gays and lesbians (Brandt & Reyna, 2010, 2014), and Black people (Hall, Matz, & Wood, 2010). Consistent with the traditional hypothesis, religious people are expected to express more prejudice than non-religious people; when religion increases prosocial, including tolerant attitudes, it is typically only towards people and groups who uphold their religious values.

The two examples of the traditional hypothesis for political ideology and religiosity are just that, examples. The logic of the hypothesis, however, should extend to any traditional belief system that is associated with dispositions that make prejudice more likely, including dispositions like the intolerance of ambiguity, sensitivity to threat, the need for closure, and

closed-mindedness. In this way, the traditional hypothesis embodies the idea that psychological processes differ between different ideological camps, and that these different psychological processes will have differential impacts on other broadly relevant attitudes and behaviors.

Worldview Conflict Hypothesis

The worldview conflict hypothesis predicts that regardless of their worldview, people will express prejudice towards individuals and groups perceived to hold conflicting attitudes and values. From this perspective, the important detail for determining who expresses prejudice is not whether a person is a liberal or a conservative, a progressive or a traditionalist, or a religious person or an atheist. Rather, the important detail is instead whether a person sees a group as holding conflicting attitudes and values – in short, a different worldview. A person's worldview is important for understanding which group a person will express prejudice towards, not *whether* they will express prejudice.

This straightforward hypothesis can be understood from a number of different perspectives. Most directly, this hypothesis essentially restates the similarity-liking principle (Byrne, 1969) in reverse, making the worldview conflict hypothesis essentially a dissimilarity-disliking principle. The tight connection between attitudinal similarity and liking was studied extensively in the 1960's and 1970's (for a meta-analysis, see Montoya, Horton & Kirchner 2008). Researchers would bring people to the lab to interact with another participant (in reality, no such other participant was typically present). Prior to the interaction, participants would complete an attitudinal questionnaire; the questionnaire would be ostensibly given to the other participant, and the actual participant would receive information about the attitudes of their ostensible interaction partner. After reading over these attitudinal responses, which were manipulated to be more or less similar to the participants, the participants would rate their liking

of their ostensible future interaction partner. The common finding across many variations of this paradigm is that increased similarity is linearly related to increased liking. The explanation for this effect was couched in a stimulus-response framework, such that similar people provided more positive relatively to negative reinforcements which increases liking (Byrne, 1969). For Byrne, this effect was so stable and convincing that he referred to it as a psychological law (Byrne & Nelson, 1965) and we know now that this link between dissimilarity and disliking develops early in life (Wynn, 2016).

More contemporary theoretical perspectives can also be used to derive the worldview conflict hypothesis. Work on symbolic threat (Haddock, Zanna, & Esses, 1993; Riek, Mania, & Gaertner, 2006) and value violations (Henry & Reyna, 2007), for example, can be seen as modern instantiations of classic similarity-liking research. This work finds that a strong and consistent predictor of prejudice is the perception that a group does not share the culture or values of the individual (for a meta-analysis, see Riek et al., 2006). One study found that a key predictor of opposition to welfare policies and gay rights was the perception that people on welfare and gay people violate values related to self-reliance or traditionalism (Henry & Reyna, 2007). Similar results have been found regarding multiple target groups in multiple countries (e.g., Rooij, Goodwin, & Pickup, 2018; Stephan, Diaz-Loving, & Duran, 2000; Stephan, Ybarra, Martinez, Schwarzwald, & Tur-Kaspa, 1998; Velasco González, Verkuyten, Weesje, & Poppe, 2008). Such value threats also, in part, help explain hostility between the Middle East and the U.S. (Sidanius, Kteily, Levin, Pratto, & Obaidi 2016).

The meaning maintenance model (Heine, Proulx, & Vohs, 2006; Proulx, Inzlicht, & Harmon-Jones, 2012) and related mental-conflict approaches (Jonas et al., 2014; Gawronski, 2012; Greenberg, Solomon, & Pyszczynski, 1997) rooted in classic dissonance theory (Festinger,

1957) can also be used to understand the worldview conflict hypothesis. The meaning maintenance model assumes that people are motivated to maintain a sense of meaning and understanding of how the world works. One prediction that follows from this assumption is that challenges to one's sense of meaning and understanding should lead to defensive reactions that help defend this sense of meaning (Greenberg, Pyszczynski, Solomon, Rosenblatt, Veeder, Kirkland, & Lyon, 1990; Proulx & Heine, 2008; Proulx & Major, 2013). Worldviews are one way that people attempt to understand their world and imbue it with meaning. Religions make this explicit and prescribe a variety of activities and modes of thought that are intended to make life meaningful. Political worldviews are not so different. When individuals and groups do not share one's worldview, it suggests that one's own worldview may not be effective at explaining how the world should and does work, reducing the meaning-making effectiveness of one's worldview. Derogating such groups with conflicting worldviews helps people maintain the validity and vitality of their own worldview.

Lastly, different worldviews may be another attribute by which people sort others into groups. Just as people quickly categorize others into groups based on their perceived sex, age, race/ethnicity, or social status, they do the same for worldview-based groups (Koch, Imhoff, Dotsch, Unkelbach, & Alves, 2016; Koch, Kervyn, Kervyn, & Imhoff, 2018). For example, the "Who Said What" memory confusion paradigm (Pietraszewski, Cosmides, & Tooby, 2014; Taylor, Fiske, Etcoff, & Ruderman, 1978) uses patterns of memory errors to unobtrusively detect the characteristics people use to categorize individuals into groups. Using this paradigm, Pietraszewski and colleagues (Pietraszewski, Curry, Petersen, Cosmides, & Tooby, 2015) found that people spontaneously used political party affiliation to encode and retrieve group-relevant information. From an evolutionary perspective (Boyer, Firat, & van Leeuwen, 2015; Clark, Liu,

Winegard, & Ditto, in press; Schaller & Neuberg, 2012; Tooby & Cosmides, 2010), this suggests that worldviews serve as an indicator of coalitions and group membership, which people see as a part of themselves (Tajfel & Turner, 1979). When people share our worldviews, they are on our teams and provide a potential ally. However, when people do not share our worldviews, they have different goals and values and are less likely to have our best interests at heart. And so, in an effort to support our goals we may express prejudice towards those who are not in our coalitions.

The veracity of each of these potential routes to the logic behind the worldview conflict hypothesis may be challenged. However, our key point is that there are multiple theoretical perspectives from across the history of social psychology and from different subfields of social psychology that provide reasons why most people may express prejudice towards people with dissimilar worldviews. Although some of these perspectives expect that such an effect will be similar across people with different types of worldviews (e.g., Greenberg et al., 1990; Proulx & Major, 2013), many are not explicit on this point beyond noting the ubiquity of these worldview conflict processes (e.g., Byrne, 1969; Wynn, 2016). In our work, we are able to test for differences in worldview conflict between differing worldviews.

How do we compare these two hypotheses?

We have set out to compare the traditional hypothesis and the worldview conflict. A key challenge for addressing whether or not people with different worldviews have different psychological processes is that many of the best demonstrations of different processes rely on paradigms with content that is not balanced across the worldviews under study (Malka, Lelkes, & Holzer, 2017). For example, Altemeyer (1998) concluded that people high in right-wing authoritarianism (a traditional worldview) are more prone to double standards in their

information processing than people low in right-wing authoritarianism on the basis of evidence that people high in right-wing authoritarianism were more supportive of mandatory Christian school prayer than mandatory Muslim school prayer; people low in right-wing authoritarianism evinced no biases. However, the premise of the judgment (mandatory prayer) is something that people low in right-wing authoritarianism object to, but people high in right-wing authoritarianism do not object to. Crawford (2012) demonstrated that changing the premise of the judgment to be more equally supported among people low and high in right-wing authoritarianism (space set aside in public schools for voluntary prayer), biases among people low and high in right-wing authoritarianism could emerge. Thus, in order to examine whether processes are equivalent or not, tests must be set up to allow for this, and oftentimes, the tests are not.

The literature on worldviews and prejudice presents a similar situation. Meta-analyses and other large-scale investigations often find that people with more traditional worldviews express more prejudice than people with more progressive worldviews (Hall et al., 2010; Sibley & Duckitt, 2008). This could be taken as evidence of ideological asymmetries in psychological processes related to prejudice. However, these studies were not designed to test both the traditional and the worldview conflict hypotheses. Instead, they were designed to test how worldviews are associated with a number of prejudices that tear at the social fabric of pluralistic and multicultural societies, such as prejudice towards ethnic minority groups, immigrants, and women. Indeed, historically, the typical target group in the literature is a group that is liberal or progressive, or at least emblematic of liberal and progressive causes. This suggests that any observed worldview asymmetry, such as that observed in the above meta-analyses, may be less of an asymmetry of process and more of an asymmetry of content. To simultaneously test the

traditional and worldview conflict hypotheses it is necessary to use a larger number of target groups that includes groups that are likely to violate the worldviews of a variety of people, including conservatives and liberals.

The typical use of unbalanced stimuli to study prejudice makes it impossible to distinguish between support for the traditional hypothesis and the worldview conflict hypothesis in the past literature. The previously-observed associations between certain worldviews (e.g., conservatism) and prejudice might be due to different prejudice-related processes (e.g., low cognitive ability, low openness to experience) as the traditional hypothesis predicts, but they may also be due to differences in content as the worldview conflict hypothesis predicts. To distinguish between the two hypotheses, it is necessary to at least include groups who are perceived to hold multiple and opposing worldviews (Brandt & Crawford, 2019). Therefore, when studying political ideology, we need to include both liberal groups and conservative groups. And when studying religion, we need to include both religious groups and non-religious (or even anti-religious) groups. A more robust method is to include groups who are representative of important groups within a given social context (Koch et al., 2016). This allows the researcher to more easily generalize from their stimuli to the target population of stimuli (e.g., social groups in society) and explore how different features of the stimuli contribute to the association between worldviews and prejudice (Brandt & Crawford, 2019). These benefits of heterogeneous stimuli are well known (Brunswik, 1956; Wells & Windschitl, 1999). We apply heterogeneous stimuli to study worldview conflict.

What Do We Find?

In our work comparing the traditional and worldview conflict hypotheses, we measure people's worldviews and then ask them to express their feelings towards target individuals or

groups that are perceived as holding similar or opposing worldviews, or to express their feelings towards a large, heterogeneous sample of target groups. This creates strong tests of the two hypotheses by creating conditions where the hypotheses make conflicting predictions (Platt, 1964; Washburn & Skitka, 2018). Specifically, the traditional hypothesis predicts that prejudice should be unique to people holding traditional worldviews. We interpret this perspective as predicting a spreading interaction, reminiscent of a hungry alligator, where people with traditional worldviews derogate groups with opposing worldviews more so than groups with similar worldviews, whereas people with progressive worldviews do not derogate groups with opposing worldviews any more than groups with similar worldviews. The worldview conflict hypothesis predicts that prejudice should be found amongst people with all sorts of worldviews. In the typical study design, this perspective predicts a cross-over interaction where people with both traditional and progressive worldviews derogate groups with opposing worldviews more so than people with similar worldviews. These predictions are visualized in Figure 1.²

² The analyses and figures in this chapter were made possible with R version 3.5.2 (2018) and the following packages: cowplot (Wilke, 2019), grid (R Core Team, 2018), lme4 (Bates, Maechler, Bolker, & Walker, 2015), metafor (Viechtbauer, 2019), rio (Chan, Chan, Leeper, & Becker, 2018), and tidyverse (Wickham, 2017).

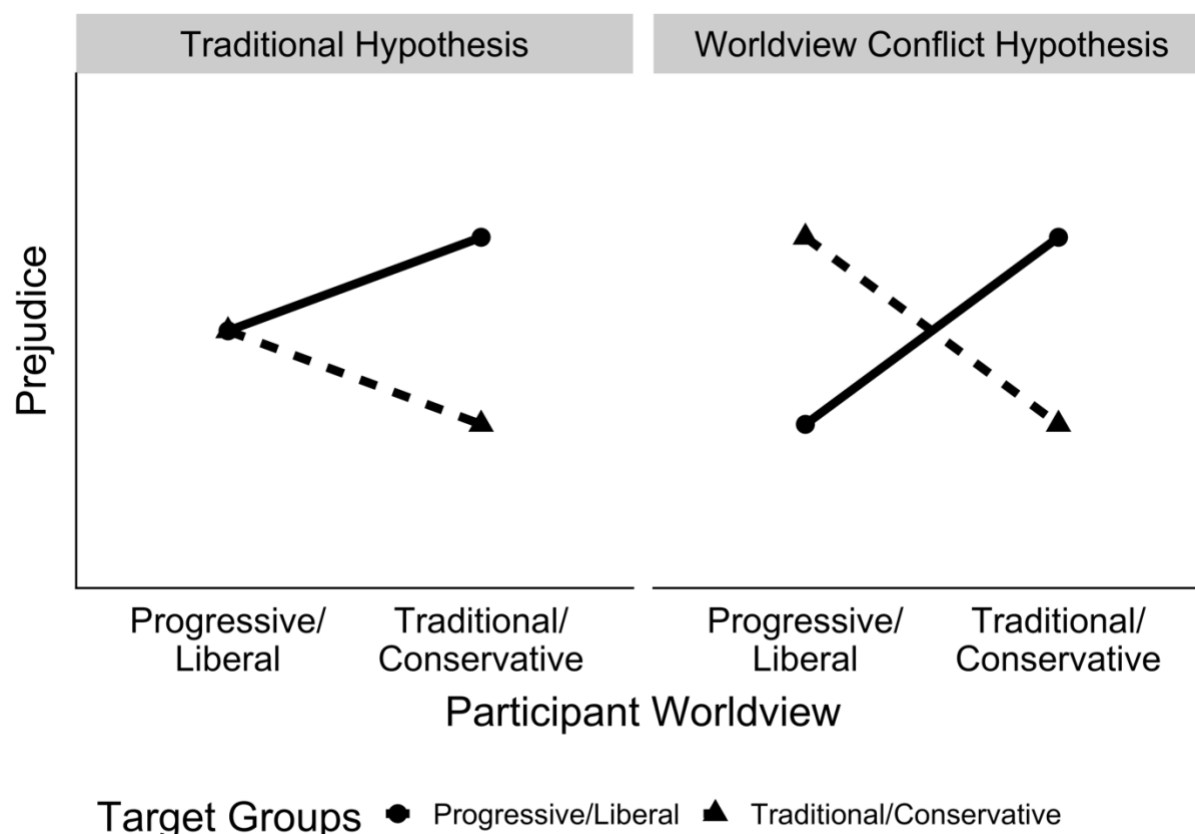


Figure 1. The predicted results of the traditional hypothesis and the worldview conflict hypothesis in the typical study design.

Ideology and Prejudice

The Original Studies

We first tested the worldview conflict and traditional hypotheses in the political domain. Back then, we didn't know each other or that we were working on these topics. Yet, with separate teams of collaborators, we conducted conceptually identical studies. Crawford and Pilanski (2014) measured American participants' identification as a liberal or a conservative using the standard one-item, seven-point scale of ideological identification. Half of their participants completed an intolerance scale for left-wing targets, which included items like, "I think that members of a state Pro-Choice organization should be allowed to distribute pro-choice

pamphlets and buttons on local college campuses.” The other half completed the same intolerance scale for right-wing targets, which included items like, “I think that members of a state Right to Life organization should be allowed to distribute pro-life pamphlets and buttons on local college campuses.” Results were consistent with the worldview conflict hypothesis. Conservatives expressed more intolerance towards left-wing targets and liberals expressed more intolerance towards right-wing targets; these perceptions were statistically mediated by the extent the target groups were perceived to threaten the country as a whole. The main effect of ideology was slightly negative and not differ from zero (Crawford, Jussim, & Pilanski, 2014), providing no support for the traditional hypothesis.

At the same time, Wetherell, Brandt, and Reyna (2013) conducted two conceptually identical studies. They averaged together American participants’ identification as a social liberal or conservative and as an economic liberal or conservative to assess overall ideological identification. Then they measured support for discrimination against both liberal (e.g., leftist protestors) and conservative (e.g., Tea Party protestors) target groups. For example, one item from their measure read, “I can see how defacing the property of leftist protestors could be justified.” In both studies, they found that liberals were more likely to support discrimination against conservatives and that conservatives were more likely to support discrimination against liberals, consistent with the worldview conflict hypothesis. These effects were mediated by the perception that the target groups violated the values of the participants. There was no evidence that the effect was stronger for conservatives, providing no support for the traditional hypothesis.

At the same time, Chambers, Schlenker, and Collisson (2013) studied how liberals and conservatives express prejudice for all of the target groups in the American National Election Studies. They found that liberals express more prejudice towards conservative groups (e.g.,

Christian fundamentalists, Anti-abortionists, Wealthy people) and that conservatives express more prejudice towards liberal groups (e.g., Gays and lesbians, Feminists, Environmentalists) as assessed with feeling thermometers. Going further, they showed that the typical association between conservatism and prejudice towards African Americans does not emerge when African American targets are specified to be conservative. In these conditions, liberals express more prejudice. The results were consistent with the worldview conflict hypothesis and were inconsistent with the traditional hypothesis.

Other Consistent Evidence

These three first papers were published by independent research groups without contact with one another. Yet, they developed similar theoretical models, conducted conceptually identical experiments, and came to the same overall conclusion (for an early summary of this work, see Brandt, Reyna, Chambers, Crawford, & Wetherell, 2014). These initial findings were replicated by multiple research groups across different time periods, samples, and countries (e.g., Crawford, 2014; Crawford, Kay, & Duke, 2015; Henry & Napier, 2017; Lassetter & Neel, 2019; Mason, 2018a; Schepisi, Panasiti, Porciello, Bufalari, & Aglioti, 2019; Yancey, 2010). Just as people express prejudice towards those with a different ideological identification, they also find people with different ideological views less interesting romantically (Mallinas, Crawford, & Cole, 2018), form fewer friendships (Bakshy, Messing, & Adamic, 2015) and romantic relationships (Huber & Malhotra, 2017) with them, and express more hostility toward people with differing views in the (academic) workplace (Honeycutt & Fredberg, 2017). These negative opinions and emotions towards dissimilar others extend to political elites; both liberals and conservatives express contempt, disgust, and anger towards politicians with dissimilar worldviews (Steiger, Reyna, Wetherell, & Iverson, 2019), and also express respect for authorities

from their own point of view (Frimer, Gaucher, & Schaefer, 2014). Across diverse research groups, methodologies, and samples, we now have clear evidence that the data from studies assessing ideological identification are primarily supportive of the worldview conflict hypothesis and not the traditional hypothesis.

Making Precise Predictions

At this point, the worldview conflict hypothesis predicts and the data show that conservatives express prejudice towards groups perceived to be liberal and liberals express prejudice towards groups perceived to be conservative. These predictions and data contradict the traditional hypothesis, but they were still relatively underdeveloped. For example, can we predict when conservatives will express a little bit more prejudice than liberals compared to when they will express a lot more prejudice than liberals? That is, can we move from mere directional predictions to predictions that also specify the size of the effect?

The worldview conflict hypothesis predicts that people will express prejudice towards individuals and groups who are perceived to hold conflicting attitudes and values. However, some individuals and groups are perceived to more clearly hold conflicting attitudes and values than other groups. Although it might feel obvious to our participants that Fundamentalist Christians hold values diametrically opposed to political liberals, it might be less obvious that this is also the case for rich people. Indeed, people's spontaneous perceptions of groups differ along a continuous "belief" dimension of stereotypes that closely maps onto the perceived liberalness or conservativeness of the group, with some groups being perceived as clearly liberal or conservative, whereas other groups are more ambiguously perceived (Koch et al., 2016). We expect that the extent a group is perceived to hold conflicting worldviews is associated with the

amount of prejudice expressed. This is consistent with Byrne's (1969) findings and theorizing decades ago: The greater the proportion of (dis)similarity the greater the (dis)liking.

We tested if we can predict the size and direction of the ideology-prejudice association using information about the perceived ideology of the target group in samples of American participants (for full details, see Brandt, 2017). First, a model was developed using the 2012 American National Election Studies combined with ratings of target groups' perceived ideology from a separate sample of American adults. Using multilevel models, expressed prejudice (as assessed with feeling thermometers) towards 24 groups was regressed on the perceived ideology of the target group, the participants' ideological identification, the interaction between perceived ideology and participants' ideology, and demographic covariates (all variables were rescaled to range from 0 to 1). The main effect of participant ideology and the interaction give us the necessary information to build a model to predict future data. That model is

$$\hat{y} = 0.022 - 1.420(\text{target ideology})$$

In this model, \hat{y} is the predicted size and direction of the association between ideology and prejudice for a target group. 0.022 is the model's prediction for the association between ideology and prejudice when the target group is perceived to be ideologically neutral (a 0 on our measure of perceived ideology). The rest of the model, $-1.420(\text{target ideology})$, indicates that as the target group is perceived as more conservative (i.e., perceived ideology increases) the association between ideology and prejudice becomes more negative (i.e., liberals express more prejudice). Conversely, as the target group is perceived as more liberal (i.e., perceived ideology decreases), the association between ideology and prejudice becomes more positive (i.e., conservatives express more prejudice).

In addition to this “ideology-only” model, we also built other models using the same data from the 2012 American National Election Studies. First, we tested a conceptually similar model that assessed the perceived conventionalism of the target group. Because perceived ideology and perceived conventionalism are highly correlated ($r = .85$), we treat these as conceptually similar models.

More importantly, we also tested the ideology-only model against models that included the perceived status of the target groups. Just as people spontaneously categorize groups based on their perceived ideological beliefs, people also spontaneously categorize people in terms of their perceived social status (Koch et al., 2016; Fiske, Cuddy, Glick, & Xu, 2002). There is good reason to believe that social status is a dimension that would predict the size and direction of the ideology-prejudice association. For example, conservatives tend to support policies and endorse moral values that bolster high status groups at the expense of low status groups (Graham, Haidt, & Nosek, 2009; Sidanius & Pratto, 2001). This may lead conservatives to express more prejudice towards low status and disadvantaged groups compared to liberals (Duckitt, 2006). Consistent with this, there is some evidence that liberals are more likely to promote the success of members of low status groups (Kteily, Rocklage, McClanahan, & Ho, 2019) and hold biases in favor of low status groups (Winegard, Clark, Hasty, & Baumeister, 2018). Moreover, people who hold anti-egalitarian values (something that is correlated with conservatism) express more empathy for low status groups (Lucas & Kteily, 2018). Therefore, models with only ideology or only conventionalism were also compared to a model with status.

The last type of model compared was a model assessing the perceived choice people had in belonging to a group. Although the amount of choice people have in belonging to any group is not always clear, people perceive others to have more choice in belonging to some

groups (e.g., feminists, Christian fundamentalists) than to other groups (e.g., Women, Whites). One could predict that conservatives will be more likely to express prejudice towards members of low choice groups than liberals because prejudice can help reinforce the boundaries between groups (Haslam, Bastian, Bain, & Kashima, 2006), something that conservatives care about (Hodson & Dhont, 2015). Therefore, models with only ideology, only conventionalism, or only status were also compared to a model with only choice. Models with individual predictors were also compared to models with all possible predictors (with the exception that ideology and conventionalism were not included in the same models due to their high correlation) and to a null model.

Table 1

Predictive models and parameters developed and tested in Brandt (2017) and Figures 2 and 3.

Model
1. Ideology only: $\hat{y} = 0.022 - 1.420(\text{target ideology})$
2. Ideology, status, and choice: $\hat{y} = 0.016 - 1.505(\text{target ideology}) + 0.128(\text{target status}) + 0.072(\text{target choice})$
3. Conventionalism only: $\hat{y} = 0.157 - 1.947(\text{target conventionalism})$
4. Conventionalism, status, and choice: $\hat{y} = 0.166 - 1.827(\text{target conventionalism}) - 0.076(\text{target status}) - 0.001(\text{target choice})$
5. Status only: $\hat{y} = 0.001 - 0.846(\text{target status})$
6. Choice only: $\hat{y} = 0.041 - .398(\text{target choice})$
7. Null: $\hat{y} = 0$

Note: \hat{y} is the predicted association between ideology and prejudice. All predictors and outcomes were scaled to range from 0 to 1. Predictors were midpoint centered, so that the intercept is the predicted association between ideology and prejudice for target groups who were perceived to have moderate levels of ideology, conventionalism, status, and choice.

After building these models using the 2012 American National Election Studies, the models were tested in new datasets. Specifically, the model-predicted association between ideology and prejudice was determined by solving the equations in Table 1. Then, the association between ideology and prejudice was calculated in four different datasets, including datasets that included target groups that the model had not seen before (Target Group N ranged from 9 to 42).

We then calculated the squared difference between the predicted values and the model estimated values (i.e., the squared errors). Across all four of these studies, the ideology-only model consistently outperformed the status-only and the choice-only models by having small squared errors than the other models. Moreover, when meta-analyzing across all four of the studies, the ideology-only model also outperformed the models including conventionalism. Although the ideology-only model did not differ from the ideology, status, and choice model, the ideology-only model is more parsimonious. It appears that the ideology-only model “wins.”

To give an example of the power of this predictive model, we examined how well the model – developed with the 2012 American National Election Study – predicts the observed estimates from the 2016 American National Election Study (reported in detail in the preprint of Brandt, 2018). Figure 2 includes all of the groups in the 2016 American National Election Study for which we had ratings of their perceived ideology, conventionalism, status, and choice. The groups are ordered from perceived as most liberal (top) to most conservative (bottom). The black dots with error bars are the observed associations and the other markers are the estimates from the models. Figure 3 shows the predictive errors for each of the models in Table 1. As is evident, the ideology-only model has the smallest prediction errors and is the most parsimonious model.

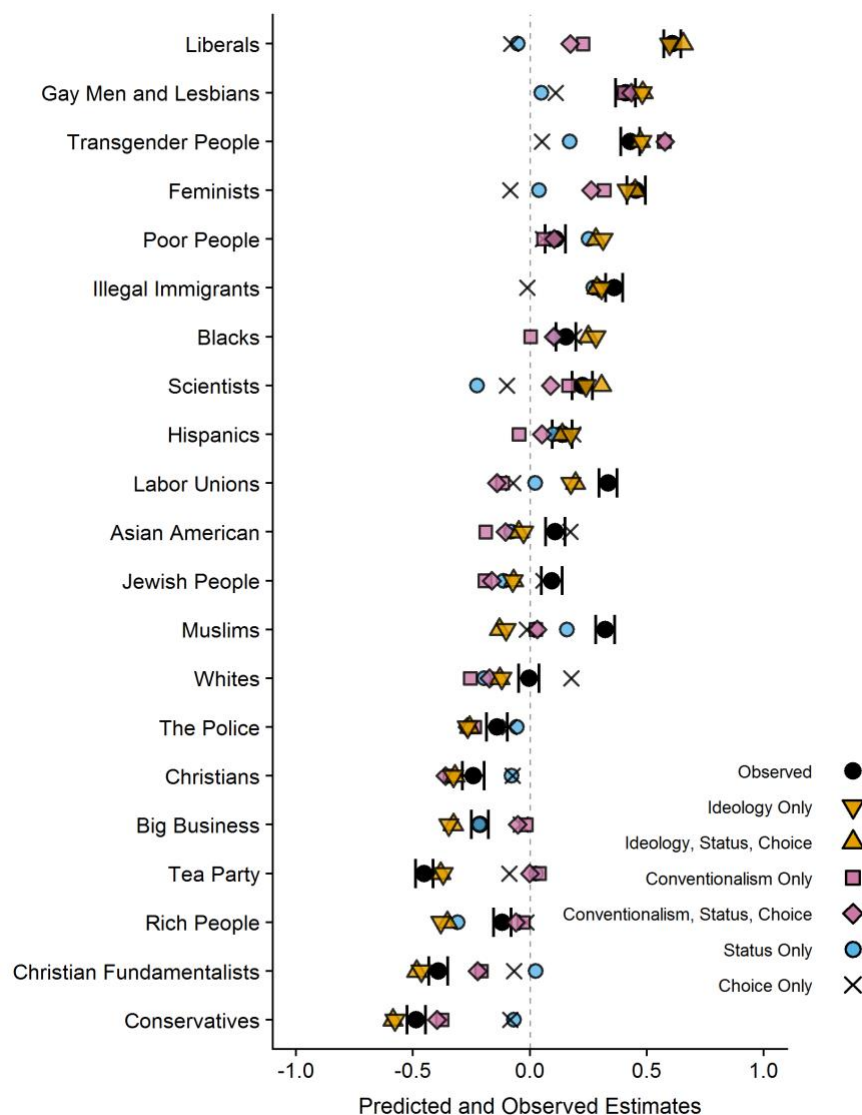


Figure 2. Comparison of the predicted and observed estimates for the association between ideology and prejudice toward the target groups. The observed estimates were obtained using ordinary least squares regression, adjusting for age, gender, education, income, and race-ethnicity. The predicted estimates were obtained from the models described in Brandt (2017). The dashed vertical line represents the predictions of the null model. All variables were coded to have a range of 1. Error bars represent 95% confidence intervals. The target groups are ordered from the group perceived as most liberal (top) to the group perceived as most conservative (bottom). Figure and caption originally published in Brandt (2018, <https://psyarxiv.com/buw8f>).

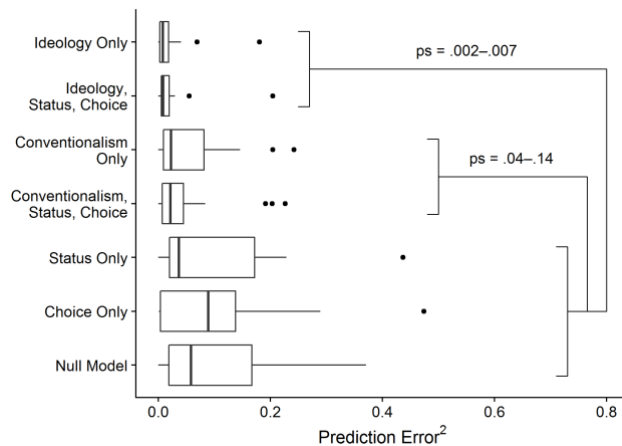


Figure 3. Box plots of the seven models' squared prediction error for the association between ideology and prejudice. The right and left edges of the box indicate the 75th and 25th percentiles, respectively, and the black line near the middle of the box is the 50th percentile. The whiskers represent the lowest and highest data points within 1.5 times the interquartile range of the lowest quartile and the highest quartile, respectively. The circles represent outliers. The ranges of p-values indicate the values obtained when the two ideology models and the two conventionalism models were compared individually with the status-only, choice-only, and null models. Figure and caption originally published in Brandt (2018, <https://psyarxiv.com/buw8f>).

The prediction studies teach us several things. First, it is possible to anticipate the size and direction of the ideology-prejudice association merely by knowing the perceived ideology of the target group. Second, perceived status and perceived choice are not viable predictors of the size and direction of the ideology-prejudice association. In combination, these points can be used to plan new studies about the associations between ideology and prejudice. Researchers, for example, often claim that it is difficult to know what effect sizes to expect. The ideology-only predictive model will give you a pretty accurate answer.

The prediction studies also teach us things by pointing out instances where the model fails. The clearest and most consistent example of this is when the target group is Muslims. Muslims are perceived to be relatively conservative and conventional. At the same time, the conservatives in our samples tended to express prejudice towards Muslims, consistent with prior

work (Echebarria-Echabe & Guede, 2007; Kalkan, Layman, & Uslaner, 2009). One challenge for future work will be to test why Muslims are an exception to the general trend and to test if such an explanation improves the model fit across all groups. A likely possibility is that although Muslims may be perceived as conservative, they may be seen as conservative in terms of a belief system that is different from (and perhaps competing with) the American conservative belief system. Integrating these nuances is one necessary step for future work.

The Multiple Dimensions of Politics and Prejudice

Multiple Dimensions of Politics? A large proportion of our work has adopted the dominant view of political ideology as a unidimensional construct: People can be more or less liberal or conservative. This follows a tradition within social psychology to focus on people's identification as a liberal or a conservative and whether this single dimension is associated with various psychological constructs, such as personality and perceived threat (e.g., Jost, 2006, 2017). Such a unidimensional approach to ideology does capture a fair amount of variance in political beliefs in the United States and some Western European countries (Azevedo, Jost, Rothmund, & Sterling, 2019). However, it now appears that such a unidimensional approach is inadequate.

It should perhaps not be surprising that a single dimension to politics is inadequate. For example, the dual-process model of prejudice builds on two ideological worldviews: right-wing authoritarianism and social dominance orientation (Duckitt, 2001; Duckitt & Sibley, 2009). The conservatism as motivated social cognition model posits two factors underlying conservatism: resistance to change and acceptance of inequality (Jost et al., 2003). Schwartz's model of abstract values consists of two overarching dimensions: conservation-openness to change and self-enhancement-self-transcendence (Schwartz, 1994). Moral foundations theory clusters their

five foundations into two overarching conceptual factors: binding foundations and individualizing foundations (Graham et al., 2013). Factor analyses and other multiple dimensional analyses of political policies often identify (at least) two factors: social issues and economic issues (Everett, 2013; Feldman & Johnston, 2014). Across these different domains there then appears to be, at least, two dimensions to political beliefs. One dimension is related to social conventions and the other is related to economic inequality.

Proposing two distinct dimensions of political beliefs does not imply that the dimensions are uncorrelated. Indeed, the correlation between social and economic issues in the United States and the United Kingdom tends to be relatively high (especially compared to social psychology standards; Azevedo et al., 2019). Instead, it should imply that, at least in some settings, the two dimensions have different predictors, correlates, and outcomes. Consistent with this, different dimensions of worldviews, values, moral foundations, and political policies have different correlations with other relevant constructs (e.g., Duckitt & Sibley, 2009; Feather & McKee, 2012; Feldman & Johnston, 2014; Kugler, Jost, & Noorbaloochi, 2014). For example, social dominance orientation is more consistently associated with individualizing foundations, whereas right-wing authoritarianism is more consistently associated with binding foundations (Kugler, Jost, & Noorbaloochi, 2014); the resistance to social change is related to higher levels of perceived legitimacy across contexts, whereas the acceptance of inequality is only associated with higher levels of perceived legitimacy in unequal contexts (Brandt & Reyna, 2017); and the personality and motivational correlates of social and economic conservatism differ (e.g., Crowson, 2009; Malka, Soto, Inzlicht, & Leikes, 2014; Schoonvelde, Brosius, Schumacher, & Bakker, 2019). Moreover, outside of the United States, the typical positive association between social and economic policies does not emerge; in some cases, the relationship is clearly negative

(Malka, Lelkes, & Soto, 2019). Taken together, there is good reason to suspect that the unidimensional approach to ideology is unlikely to capture all of the relevant nuances of worldview conflict.

Multiple Hypotheses for Multiple Dimensions. When extending the worldview conflict hypothesis to multiple dimensions, the hypothesis becomes more specified. Specifically, when assessing social political ideology, the worldview conflict should be most salient on the social dimension and when assessing economic political ideology, the worldview conflict should be the most salient on the economic dimension. And so, the *dimension specific worldview conflict hypothesis* predicts that social (but not economic) conservatism should predict prejudice towards socially liberal targets (e.g., atheists), but that social (but not economic) liberalism should predict prejudice towards socially conservative targets (e.g., Evangelical Christians). However, economic (but not social) conservatism should predict prejudice towards economically liberal targets (e.g., welfare recipients), and economic (but not social) liberalism should predict prejudice towards economically conservative targets (e.g., investment bankers) (Crawford, Brandt, Inbar, Chambers, & Motyl, 2017).

There are, however, at least two other plausible hypotheses to consider. First is the *social primacy hypothesis*. This hypothesis is similar to the dimension specific worldview conflict hypothesis, but it predicts that the effects will be larger on the social dimension. The social dimension may lead to larger effects because social issues are often less technical and more closely tied to symbolic and value-laden beliefs than are economic issues (Carmines & Stimson, 1980; Johnston & Wronski, 2015). This might suggest that people more readily experience strong and intuitive gut-reactions along that social dimension compared to the economic dimension. Consistent with this idea, personal values more closely underlie social

issues compared to economic issues (Malka et al., 2014), social issues are more closely correlated with people's ideological identifications (Feldman & Johnston, 2014), and the most ideologically divisive moral foundations are those related to social issues (Graham, Haidt, & Nosek, 2009; Koleva, Graham, Iyer, Ditto, & Haidt, 2012).

The other plausible hypothesis is the *social specific traditional hypothesis*. This hypothesis predicts that social conservatives will express prejudice, but that social liberals will not. That is, this hypothesis is the traditional hypothesis, but limited to the social domain. Social conservatives may be especially primed to express prejudice because the needs and motivations thought to motivate prejudice among conservatives generally (e.g., need for closure) are more clearly related to social conservatism (e.g. Feldman & Johnston, 2014; Malka et al., 2014; van Hiel, Pandelaere, & Duriez, 2004). These same needs are often weakly related or unrelated (van Hiel et al., 2004) and sometimes negatively related (Malka et al., 2014) to economic conservatism (see also Johnston, Levine, & Federico, 2017). Because of these less clear associations with economic conservatism, this hypothesis is agnostic about the associations between economic political ideology and prejudice.

Testing Three Dimension Specific Hypotheses. The three dimension specific hypotheses have now been tested in 10 samples from the United States and Poland using several different measures of prejudice, including feeling thermometers, the implicit association test, and the dictator game (Crawford et al., 2017; Czarnek, Szwed, & Kossowska, 2019). People's positions on social and economic dimensions of political ideology were measured using people's self-identification as liberal or conservative on social and economic dimensions, or with people's support for various social and economic political policies. And separate samples rated the target groups on their perceived social and economic ideologies. In the United States, these two

perceptions were highly correlated ($r[16] = .88$, Crawford et al., 2017, Study 1), whereas in Poland they were not ($r[13] = .05$, Czarnek et al., 2019, Study 1). This is consistent with work suggesting that ideology is more unidimensional in the United States compared to other contexts, such as Post-Communist countries (Malka et al., 2019). The question from our perspective is, are people's scores on the two dimensions of political ideology associated with prejudice towards different types of groups based on those groups' positions on the two dimensions?

This is the case. Across the 10 samples, there was evidence that the specific dimensions mattered when it came to prejudice. On the social dimension, social conservatism was associated with prejudice towards groups perceived to be socially liberal, whereas social liberalism was associated with prejudice towards groups perceived to be social conservative. On the economic dimension, economic conservatism was associated with prejudice towards groups perceived to be economic liberals, whereas economic liberalism was associated with prejudice towards groups perceived to be economic conservatives (Crawford et al., 2017; Czarnek et al., 2019). These effects were exacerbated when the targets were described as extreme, suggesting the perceived worldview conflict (sometimes measured in these studies as value violations) accounts for the effects (Czarnek et al., 2019). The interaction effects on the opposing dimension (e.g., participants' social ideology interacting with economic ideology) were substantially weaker and inconsistent across studies, if they emerged at all.

Taken as a whole, the results refute the social specific traditional hypothesis. It is also possible to compare the dimension-specific worldview conflict hypothesis with the social primacy hypothesis, which predicts that the effects will be largest on the social dimension. The evidence is mixed across the studies (e.g., see the summary in Crawford et al., 2017, Table 6) and so it is not yet possible to come to firm conclusions on this particular issue. However, we

should note that the social primacy hypothesis has the most support in Crawford and colleagues (2017) studies, and also finds support in Czarnek and colleagues work (2019). Therefore, at this point, we suggest that the social domain is the domain most consistently associated with worldview conflict; however, in different cultural contexts or points in history this may change.

Party Identification and Prejudice

At the same time we were developing our work on the worldview conflict hypothesis, researchers in political science were identifying and investigating the growing tendency for Americans to express dislike for the opposing political party (Iyengar, Sood, & Lelkes, 2012; Iyengar, Lelkes, Levendusky, Malhotra, & Westwood, 2019). In these studies, participants express their identification with a political party (typically, Democrats or Republicans) and express their prejudice towards the out party (typically, using feeling thermometers and measures of social distance). They find that people like their inparty more than their outparty, an effect dubbed affective polarization. Affective polarization has been growing since at least the 1970s in the United States, in part because people take cues from the polarization of political elites (Abramowitz & Webster, 2016) and have fewer cross-cutting identities (e.g., racial, religious, and political identities are increasingly less likely to align; Mason, 2015). Evidence of affective polarization has been found using self-report measures (Iyengar et al., 2012), but also with the implicit association test (Iyengar & Westwood, 2015), economic games (Carlin & Love, 2018; Iyengar & Westwood, 2015; Tappin & McKay, in press; Westwood, Iyengar, Walgrave, Leonisio, Miller, & Strijbis, 2018), real-life economic decisions (e.g., hiring; Gift & Gift, 2015; McConnell, Margalit, Malhotra, & Levendusky, 2018; Michelitch, 2015), measures of subtle and blatant dehumanization (Cassés, in press), and endorsements of partisan violence and terrorism (although absolute rates are relatively low; Kalmoe & Mason, 2019). Evidence for affective

polarization has been found in countries outside of North America, including Belgium, the United Kingdom, El Salvador, and South Africa among others (e.g., Carlin & Love, 2018; Westwood et al., 2018). Importantly for our purposes, affective polarization holds for Democrats (and left-wing parties in general) and Republicans (and right-wing parties in general) providing support for the worldview conflict hypothesis and evidence against the traditional hypothesis.

Affective polarization researchers typically just focus on evaluations of the outparty and its members. That is, they do not focus on the range of possible target groups and often use measures that invoke political elites (Druckman & Levendusky, in press). There are two exceptions. The first examines how party identification is associated with feeling thermometers of target groups included in the 2016 American National Election Study, with the basic idea that partisan differences should also emerge for feeling thermometers for groups who are merely associated with the outparty (Mason, 2018b). And this is indeed what was found. Republicans not only dislike the Democratic party, but they also dislike feminists, labor unions, and transgender people. Democrats not only dislike the Republican party, but they also dislike Christian fundamentalists, rich people, and big business. The second finds that partisan differences in prejudice towards social groups has increased over time, just like differences in prejudice towards the outparty (Robison & Moskowitz, in press). Moreover, in longitudinal data they find that social group prejudices may drive party prejudices.

Although these studies demonstrate that partisan identification can inspire prejudice towards groups that appear merely affiliated with the outparty, it does not provide a way to understand where researchers should expect the largest differences. Just as is the case with ideological identification, the worldview conflict hypothesis can be used to predict the size and direction of the party identification and prejudice association. In a country such as the United

States, where party identification and ideological identification are increasingly connected (e.g., Abramowitz & Saunders, 1998), the association between party identification and prejudice should track the perceived ideology of the target group.

We tested this by developing predictive models, like those used in Brandt (2017) and described above. We used the 2012 American National Election Study to develop 6 models (plus a null model) of the association between party identification and prejudice. These models are reported in Table 2. Then, we tested the accuracy of these model predictions by comparing the predictions to observed data from the 2016 American National Election Study. The results are presented in Figures 4 and 5. The models with the smallest errors were those that used the perceived ideology of the target group as the predictor. Models with status or choice were not successful. This result suggests that the models developed for perceiver ideology and prejudice work well for understanding the size and direction of the association between perceiver party identification and prejudice.

Table 2

Predictive models and parameters developed and tested here and Figures 4 and 5 for the association between party identification and prejudice.

Model
1. Ideology only: $\hat{y} = 0.018 - 0.753(\text{target ideology})$
2. Ideology, status, and choice: $\hat{y} = 0.016 - 0.769(\text{target ideology}) + 0.005(\text{target status}) + 0.0048(\text{target choice})$
3. Conventionalism only: $\hat{y} = 0.103 - 0.986(\text{target conventionalism})$
4. Conventionalism, status, and choice: $\hat{y} = 0.096 - 0.795(\text{target conventionalism}) - 0.300(\text{target status}) - 0.175(\text{target choice})$
5. Status only: $\hat{y} = 0.001 - 0.573(\text{target status})$
6. Choice only: $\hat{y} = 0.021 - 0.175(\text{target choice})$
7. Null: $\hat{y} = 0$

Note: \hat{y} is the predicted association between party identification and prejudice. All predictors and outcomes scaled to range from 0 to 1. Predictors are midpoint centered, so that the intercept is the predicted association between party identification and prejudice for target groups who are perceived to have moderate levels of ideology, conventionalism, status, and choice. Models developed using the 2012 American National Election Study and the group ratings from Study 2 of Brandt (2017).

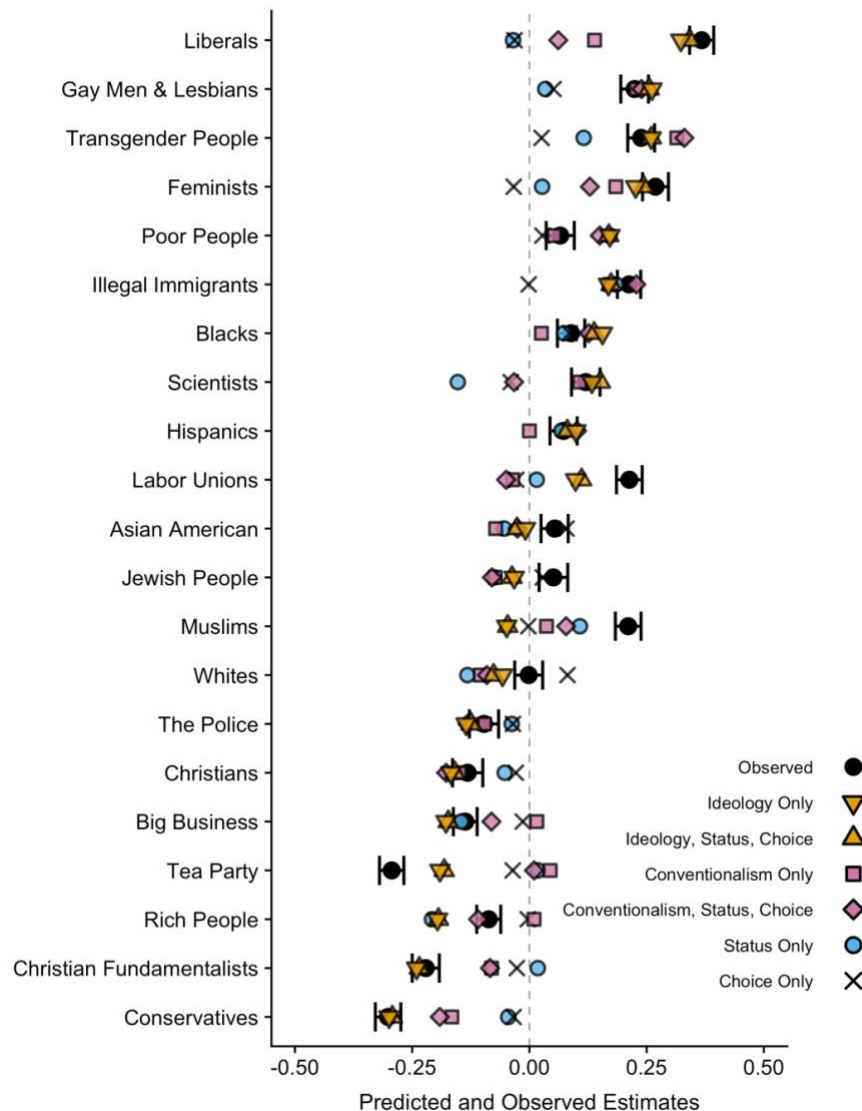


Figure 4. Comparison of the predicted and observed estimates for the association between party identification and prejudice toward the target groups. The observed estimates were obtained using ordinary least squares regression, adjusting for age, gender, education, income, and race-ethnicity. The predicted estimates were obtained from the models described in Table 2. Group ratings used to make model predictions are from Study 2 of Brandt (2017). The dashed vertical line represents the predictions of the null model. All variables were coded to have a range of 1. Error bars represent 95% confidence intervals. The target groups are ordered from the group perceived as most liberal (top) to the group perceived as most conservative (bottom).

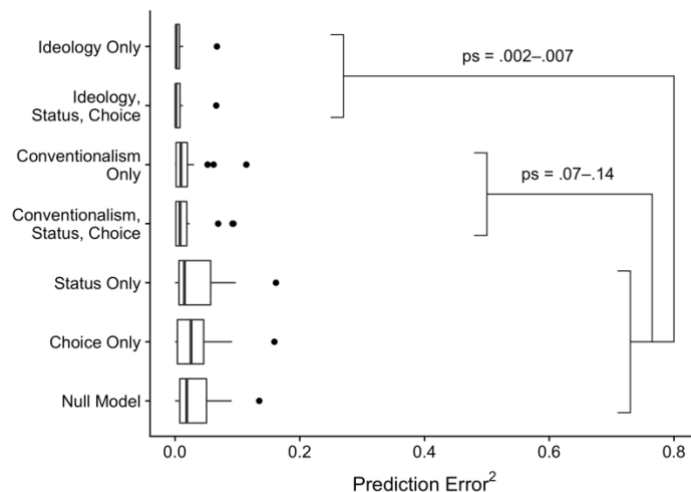


Figure 5. Box plots of the seven models' squared prediction error for the association between party identification and prejudice. The right and left edges of the box indicate the 75th and 25th percentiles, respectively, and the black line near the middle of the box is the 50th percentile. The whiskers represent the lowest and highest data points within 1.5 times the interquartile range of the lowest quartile and the highest quartile, respectively. The circles represent outliers. The ranges of p-values indicate the values obtained when the two ideology models and the two conventionalism models were compared individually with the status-only, choice-only, and null models.

The models developed and tested above are important for moving work on affective polarization beyond testing how prejudice is expressed towards the outparty to how prejudice is expressed towards groups who are merely affiliated with the outparty and its ideology in some way. As with the models of ideology and prejudice, these models can be used to make predictions about target groups the model hasn't seen, as well as highlight those target groups (e.g., Muslims) who are not well explained by the model. Perhaps more interestingly, by moving affective polarization work beyond outparty prejudice, it makes it possible to think about how affective polarization can impact attitudes outside party politics.

Religion and Prejudice

Politics is just one domain where worldview conflict might occur. Conflicts over religious beliefs might be some of the longest running worldview conflicts. Such conflicts pose a

puzzle because many world religions are associated with values of mercy, love for others, and tolerance (e.g., Schumann, McGregor, Nash, & Ross, 2014; Saroglou, Delpierre, & Dernelle, 2004). Yet, many scholars have found that religion is associated with forms of prejudice (e.g., Brandt & Reyna, 2010, 2014; Jackson & Esses, 1997). We build on this work and suggest that the prejudices of the religious and non-religious can be understood through the lens of worldview conflict.

We have tested the worldview conflict hypothesis in the context of religious fundamentalism (Brandt & Van Tongeren, 2017). Prior work suggests that religious fundamentalists express more prejudice than non-fundamentalists because fundamentalists are more closed-minded (Brandt & Reyna, 2010), have higher needs for structure (Hill et al., 2010), and hold authoritarian values (e.g., Brandt & Reyna, 2014; Laythe, Finkel, & Kirkpatrick, 2001). However, this prior work used a relatively limited range of target groups. In our work we expanded the range of target groups. Pre-testing showed that Catholics, Tea Party activists, Conservatives, and Christians are seen as similar to religious fundamentalists in the United States. Atheists, gay men and lesbians, liberals, and feminists are seen as similar to people who are not religious fundamentalists. In both representative and convenience samples we found that people scoring higher on an ad-hoc measure of fundamentalism or Altemeyer and Hunsberger's (1992) religious fundamentalism scale expressed more prejudice towards groups dissimilar to fundamentalists, whereas people scoring lower on the scale expressed more prejudice towards groups similar to fundamentalists. This effect emerged on feeling thermometers, measures of social distance, and a measure of dehumanization. For both fundamentalists and non-fundamentalists, results were mediated by perceptions of threat, including threats to values and the rights of other groups. These patterns are in line with the worldview conflict hypothesis.

There is a complication, however. Although the pattern is in line with the worldview conflict hypothesis, we did find larger effects for fundamentalists than non-fundamentalists. This might suggest that, although worldview conflict-like processes play a role for fundamentalists and non-fundamentalists, the various processes underlying the traditional hypothesis may also be at work. Another potential explanation is that it is not clear what it means to be a non-fundamentalist. Participants can score low on Altemeyer and Hunsberger's measure because they are religious but non-fundamentalist or because they are not-religious. Therefore, we conducted a study using Duriez and colleagues (Duriez, Soenens, & Hutsebaut, 2005) post-critical belief scale that separates out the type of belief (religious vs. non-religious) from the style of belief (rigid vs. flexible) and the same target groups as before (Brandt & Van Tongeren, 2017). Here we found clear evidence for the worldview conflict hypothesis. People who were religious expressed prejudice towards groups who were seen as dissimilar to religious people. People who were not religious expressed prejudice towards groups who were seen as dissimilar to non-religious people. These two effect were similar in size. The index of belief style, however, was not clearly associated with prejudice.

Conceptually similar results have been found by other scholars. For example, Kossowska and colleagues (Kossowska, Czernatowicz-Kukuczka, & Sekerdej, 2017) found that dogmatic religious people expressed prejudice towards atheists, whereas dogmatic atheists expressed prejudice towards Catholics in a Polish sample. Other scholars have examined participants who identify as atheist, agnostic, and as Christian from the United Kingdom, France, and Spain (Uzarevic, Saroglou, & Muñoz-García, in press). They found, across the three countries, that non-religious people (both atheists and agnostics) expressed more prejudice towards anti-liberal groups (e.g., antigay activists, fundamentalists) and less prejudice towards

Catholics compared to Christian participants. A final study from the United States showed that religious fundamentalism was associated with prejudice towards Blacks, but only when the measure is framed as a violation of fundamentalist values (Brandt & Reyna, 2014). Combined, these results provide clear support for the worldview conflict hypothesis across multiple countries.

Personality

We find consistent support for the worldview conflict hypothesis in multiple countries and across political and religious domains. In some ways, this is strange. We find that people with both progressive and traditional worldviews express prejudice towards groups with different worldviews and values. Yet, there is good evidence that personalities and motivations that likely increase prejudice also characterize people with traditional worldviews (e.g., Sibley & Duckitt, 2008). Moreover, according to some theoretical accounts (e.g., Hodson & Dhont, 2015), these individual differences in personality, cognitive styles, and cognitive abilities form the basis of prejudice, such that the individual differences lead to more traditional worldviews which, in turn, lead to prejudice. This is a paradox. The tension between this prior work and our own findings led us to consider other types of characteristics beyond politics and religion that had traditionally been tied to prejudice. Specifically, we examined the Big Five personality traits, disgust sensitivity, and cognitive ability.

The Big Five Traits

An obvious first step was to re-examine the relationship between personality traits and prejudice, especially through the lens of the Big Five theory of personality (Costa & Macrae, 1985), using our heterogeneous groups approach. In the literature, two traits in particular were tied to prejudice: low Openness to Experience and low Agreeableness. Decades of individual

studies had been meta-analytically summarized by Sibley and Duckitt (2008) confirming that low Openness and low Agreeableness were the only two Big Five personality traits reliably associated with prejudice (meta-analytic effect size estimates of $r = -.30$ and $-.22$, respectively).

These traits are connected to prejudice via their associations with people's worldviews:

Openness and Agreeableness are differentially related to right-wing authoritarianism and social dominance orientation, respectively, and effects of Openness on prejudice are mediated through right-wing authoritarianism whereas effects of Agreeableness on prejudice are mediated through social dominance orientation (Sibley & Duckitt, 2008).

As in the literature on politics and religion, however, work linking low Openness and low Agreeableness to prejudice was primarily focused on low status, disadvantaged target groups. In Duckitt and Sibley's (2008) meta-analysis, target groups were either ethnic minority groups or women, or included studies of generalized prejudice. However, studies of generalized prejudice, which purport to examine the relationship between personality and prejudice toward an array of groups, only include low status target groups. For example, common measures of generalized prejudice include prejudice towards racial minorities, women, gay men and lesbians, the disabled, and immigrants (Akrami et al., 2011; Akrami et al., 2009; Ekehammar & Akrami, 2003; 2007; Ekehammar et al., 2004).

We therefore conducted a series of studies examining not only the relationship between Big Five traits and prejudice toward a more heterogeneous array of targets, but also examining what types of target traits or characteristics might moderate the relationship between personality and prejudice. In an initial series of four studies (Brandt et al., 2015), we focused solely on Openness to experience. These studies suggested that both people low and high in Openness expressed prejudice towards groups with conflicting worldviews. Such worldview conflict

partially centers around perceived conventionalism. Specifically, whereas low Openness was associated with prejudice towards socially unconventional groups (e.g., atheists, gay men and lesbians), high Openness was associated with prejudice towards socially conventional groups (e.g., Catholics, military personnel). Thus, rather than Openness functioning as a dispositional trait that orients people toward greater Openness to differences generally, it directs prejudice toward dissimilar groups—people low in Openness are more conventional and people high in Openness are more unconventional.

These initial findings suggested that the link between personality and prejudice is not consistent across target groups. Moreover, they provided a hint that, when associations between personality traits and generalized prejudice have emerged, such observations might be due to the relatively narrow array of groups used in measures of generalized prejudice. A broader conceptualization of generalized prejudice that includes (for example) conventional and unconventional target groups might have different personality traits that underpin it.

To explore these ideas and build on the finding of Brandt et al. (2015), we meta-analyzed four studies on the relationship between all of the Big Five traits and prejudice towards a heterogeneous array of groups (Crawford & Brandt, 2019). This allows us to assess how personality is related to a narrow conceptualization of generalized prejudice (consistent with prior work; e.g., Akrami et al., 2009, 2011) and how personality is related to a broad conceptualization of generalized prejudice that contains many more groups. In addition, this approach would allow us to a) determine whether effects of Agreeableness on prejudice depended on target characteristics (like Openness did) or whether its effects were robust to variation in target characteristics, and b) whether the other three traits that had not been linked to prejudice in the past might emerge as predictors when using a wider variety of targets.

The results for all five traits are summarized in Figure 6. We focus on the results of Agreeableness and Openness due to their robust association with generalized prejudice in past research. Consistent with that prior work, we found that low Openness ($pr = -.17$, 95%CI [-.20, -.14]) and low Agreeableness ($pr = -.25$, 95%CI [-.33, -.17]) were both associated with higher levels of narrow generalized prejudice. When including a broader array of groups, we find that the link between Openness and prejudice shrinks to near zero ($pr = -.03$, 95%CI [-.07, -.001]), whereas the link between Agreeableness and prejudice remains the same ($pr = -.23$, 95%CI [-.31, -.16]). Neuroticism ($pr = -.00$, 95%CI [-.05, .05]) and Conscientiousness ($pr = .02$, 95%CI [-.01, .06]) were not associated with broad generalized prejudice and low Extraversion was weakly associated with higher levels of broad generalized prejudice ($pr = -.09$, 95%CI [-.12, -.05]).

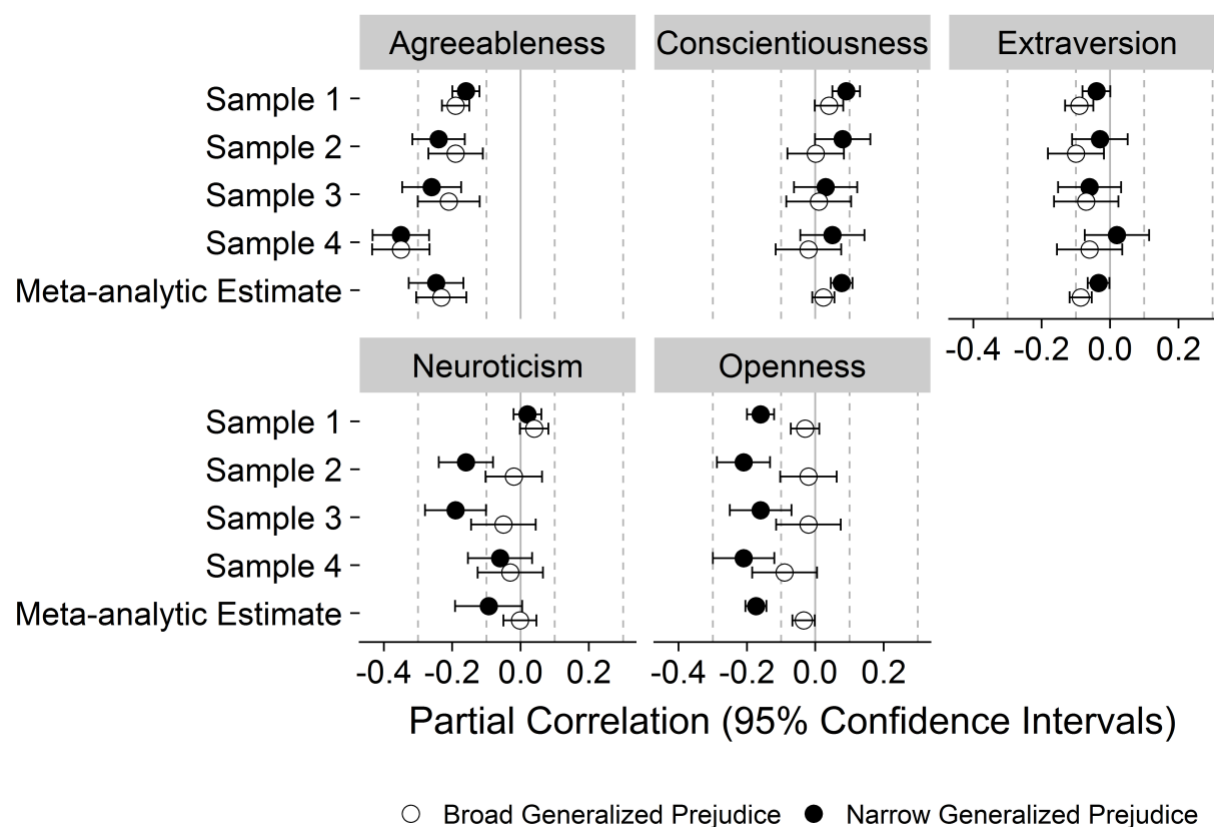


Figure 6. Partial correlations (95% confidence intervals) for the association between personality traits and broad and narrow conceptualizations of generalized prejudice. Solid vertical dashed lines represent small and medium effect sizes. Estimates are from Crawford and Brandt (2019). Groups such as gay men and lesbians, poor people, and Muslims were included in the measure of narrow generalized prejudice. These groups, in addition to groups such as atheists, rich people, and Mormons, were included in the measure of broad generalized prejudice. The full list of groups is available in the supplemental materials of Crawford and Brandt (2019).

We also examined whether several target group characteristics (ideology, status, warmth, choice of group membership) central to social perception (Cuddy, Fiske, & Glick, 2008; Koch, Imhoff, Dotsch, Unkelbach, & Alves, 2016; Weiner, 1995) along with traits we thought might serve as markers of dissimilarity (e.g., assertiveness for trait Extraversion), might moderate the effects of Big Five traits on prejudice. Perceived ideology moderated effects of

Openness and Conscientiousness on prejudice, with those low in Openness and high in Conscientiousness being more prejudiced against liberal targets, and those high in Openness and low in Conscientiousness more prejudiced against conservative targets. Whereas there were some factors that moderated the Agreeableness-prejudice relationship, these factors only strengthened or weakened the relationship, rather than eliminating or reversing it.³

It might be possible that personality's role in worldview conflict is as a moderator. That is, for people with different personality traits, such as high Openness, the link between worldview conflict and prejudice may be weaker than for people with other personality traits, such as low Openness. We have tested this in Studies 3 and 4 in Brandt and colleagues (2015) work on Openness and prejudice. In Study 3, we were surprised to find that worldview conflict was more strongly linked with prejudice among people high in Openness. However, in Study 4 we found that worldview conflict was similarly linked with prejudice among people high and low in Openness. Therefore, we do not find consistent evidence that Openness moderates the link between worldview conflict and prejudice, although future studies may reveal more consistent effects.

Together, this work showed that (a) for both Openness and Conscientiousness, the link between personality and prejudice is determined by the perceived ideology of the target groups and (b) low Agreeableness tends to be related to more prejudice across a range of target groups. The results for Openness and Conscientiousness helps resolve our paradox. Low Openness and high Conscientiousness do not uniquely prime-the-pump for prejudice. Instead both high and low

³ An interesting, but unexpected and somewhat tangential finding was that Extraversion's association with prejudice was moderated by the status of the target group. We found that low Extraversion was associated with prejudice towards high status groups, something that would not have been found using the narrow conceptualization of generalized prejudice.

levels of Openness and Conscientiousness prime-the-pump for prejudice, just towards different groups.

Disgust Sensitivity

Disgust sensitivity is a reliable individual difference that captures a propensity to experience disgust, and has been linked to a number of pathological conditions (e.g., phobias, sexual dysfunction, obsessive compulsive disorder; van Overveld et al., 2011). It is also consistently correlated with more conservative worldviews (Inbar, Pizarro, Iyer, & Haidt, 2012; Smith et al., 2011; Terrizzi et al., 2010). Previous scholarship linked disgust sensitivity to intergroup attitudes (Hodson & Dhont, 2015), especially toward sexually non-normative targets (e.g., gays and lesbians; Inbar et al., 2009; Terrizzi et al., 2010) and immigrants (Hodson & Costello, 2007). This work sees heightened experiences of disgust as related to the behavioral immune system (Schaller & Neuberg, 2012), by which the emotion of disgust evolved to protect the self and one's group from potentially harmful contaminants (including the potential contamination through interaction with other groups).

However, the work on disgust sensitivity and prejudice suffers from the same shortcomings as much of the work we've reviewed: it uses a limited number of target groups. Given disgust sensitivity's link with the purity moral foundation (Wagemans, Brandt, & Zeelenberg, 2018) and conservative views about sex (Olatunji, 2008), one group characteristic that might be particularly useful for understanding when disgust sensitivity is related to more or less prejudice is the extent the groups threaten or uphold traditional sexual morality. In a sample of Americans, Crawford, Inbar, and Maloney (2014) examined the relationship between disgust sensitivity and prejudice toward groups that varied in whether they threaten (e.g., pro-choice political activists) or uphold (e.g., Evangelical Christians) traditional sexual morality. Whereas

high disgust sensitivity was associated with prejudice towards groups that threaten traditional sexual morality, low disgust sensitivity was associated with prejudice towards groups that uphold traditional sexual morality, and to equal degrees. It was less associated with prejudice towards left- or right-leaning groups unassociated with sexual morality (e.g. gun rights/gun control political activists).

This work showed that (a) the link between disgust sensitivity and anti-gay attitudes is part of a broader set of prejudices towards groups who threaten traditional sexual morality and that (b) low levels of disgust sensitivity can also be linked with prejudice, as long as the target groups uphold traditional sexual morality. This helps resolve our paradox. Disgust sensitivity does not uniquely prime-the-pump for prejudice. Instead both high and low levels of disgust sensitivity prime-the-pump for prejudice, just towards different groups.

Cognitive Ability

Another individual difference previously associated with prejudice and more conservative worldviews is low cognitive ability. For example, in reanalyses of evidence from Deary, Batty, and Gale (2008) and Keillor (2010), Hodson and Busseri (2012) show that low general intelligence in youth is associated with greater racism in adulthood, and that poor abstract reasoning is associated with anti-gay attitudes. This association has been further confirmed in a meta-analysis of 23 studies (Onraet, Van Hiel, Dhont, Hodson, Schittekatte, & De Pauw, 2015). Just as the other domains we have reviewed, the research linking low cognitive ability or low intelligence to prejudice has similarly been limited to prejudice towards low status or historically disadvantaged groups (e.g., Hello, Scheepers, & Slegers, 2006). Cognitive ability is also related to conservative worldviews (meta-analytic $r = -.20$; Onraet et al., 2015). Following

the results we have reviewed thus far, this suggests that the link between cognitive ability and prejudice may be limited to prejudice towards low status and unconventional groups.

We tested this idea with data from a large sample representative of American adults ($N = 5,914$) that included both a measure of verbal intelligence along with measures of prejudice (feeling thermometers) against a heterogeneous array of 24 groups (Brandt & Crawford, 2016). There was no relationship between cognitive ability and prejudice overall. Instead, lower cognitive ability was associated with prejudice towards groups perceived as liberal, unconventional, or as having little choice over their group membership; however, higher cognitive ability was associated with prejudice towards groups perceived as conservative, conventional, or as having greater choice over their group membership. The perceived status of the target groups did not play a role. Further, the size of intergroup biases among people low and high in cognitive ability was equal to each other (i.e. the difference between the groups they like vs. dislike was equal in size).

This study suggests that low cognitive ability does not seem to orient people toward prejudice per se. Instead, these findings confirm previous work by showing a clear relationship between low cognitive ability and prejudice towards unconventional groups (e.g., Onraet et al., 2015). But they also go further to suggest that the conclusion that low cognitive ability is associated with prejudice is too broad. High cognitive ability is also associated with prejudice, just towards different sets of groups.

Summary

Together, these findings indicate that, like religious and political worldviews, Openness to Experience, disgust sensitivity, and cognitive abilities are inconsistent predictors of prejudice. The strength and direction of their effect on prejudice depends on characteristics of the target

(e.g., ideology, conventionality, approach to traditional sexual morality). These characteristics are markers of dissimilarity and worldview conflict. This means that many of the traits that we would have thought would help diminish the experience of worldview conflict among people with progressive worldviews actually do no such thing. Instead, they seem to orient people towards different targets of prejudice. What seemed like a paradox, does not appear to be a paradox after all.

It would be nice to end on a note of such clarity. But, that would not do full justice to the data. Crawford and Brandt (2019) identified low Agreeableness as a consistent predictor of prejudice. Across a variety of targets with different types of characteristics, low Agreeableness is associated with prejudice. Further, low Agreeableness was not linked to disliking of non-human objects (i.e., frogs, robots), suggesting that the low Agreeableness-prejudice link observed in these studies is not attributable to a general negativity among those low in Agreeableness (e.g., Graziano et al., 2007), but rather an orientation towards other people. And so, although the paradox is not as acute, there is still a paradox. One simple explanation may be that the link between low Agreeableness and traditional worldviews is not strong enough to override the robust link between dissimilarity and prejudice. Another possibility is that the link between low Agreeableness and traditional worldviews is not straightforward. Although, there is a clear link between low Agreeableness and social dominance orientation (Sibley & Duckitt, 2008), high agreeableness is actually associated with a religious worldview (Saroglou, 2002b). Unraveling the complex associations between Agreeableness, traditional worldviews, and prejudice may help further resolve the paradox we have identified in our work.

Why the Disconnect?

As should be clear by now, our findings appear quite different from the typical findings in the prejudice literature. Whereas the previous literature suggests that people who are conservative, religious fundamentalist, low in Openness, disgust sensitive, and low in cognitive ability have a monopoly on prejudice and intolerance, our work finds that people who are liberal, less religious, high in Openness, low in disgust sensitivity, and high in cognitive ability are also prejudiced, just toward different targets. How do we come to such different conclusions?

One possibility is that prior research on these topics is simply incorrect. We do not think that is the case. Conservatism, religious fundamentalism, low Openness, etc., *do* predict prejudice—just only toward certain types of target groups. Our simple improvement of including heterogeneous arrays of targets allows the operationalization of prejudice to match the definition of prejudice as a negativity toward any outgroup. This does not negate the fact that these factors do reliably predict prejudice toward low status and historically disadvantaged groups. Therefore, we believe that rather than incorrect, prior studies of the individual differences associated with prejudice were simply incomplete. With a fuller array of targets from across life and society, we can gain a more complex (but at times, more simple) understanding of the antecedents of prejudice.

Another distinct, but related reason is that the prior literature was biased toward understanding the nature of prejudice towards low status, disadvantaged groups. There has long been an explicit acknowledgement of the use of social psychological research to address society's ills (Allport, 1954; Crandall, 2019; Flyvbjerg, Landman, & Schram, 2012; Lewin, 1946; Reicher & Haslam, 2013). These are no doubt noble efforts (with which we personally agree) motivated by good intentions. At the same time, there has also existed a tension between

social psychological science as a means of describing vs. altering the social world (Eagly, 2016). Social psychologists are predominantly politically left of center (e.g., Eitan et al., 2018; Inbar & Lammers, 2012), and some have suggested that this ideological imbalance in the field can lead to biased approaches to psychological research (Duarte et al., 2015; Jussim et al., 2016). Research on politics and prejudice are undoubtedly at the nexus of such concerns.

Another possibility is that there are individual differences that might make people more (or less) prone to prejudice, but these tendencies are often overridden by other factors. For example, despite suggestions that conservatives are uniquely likely to see their opponents as threatening (Jost, Stern, Rule, & Sterling, 2017), people from across the political spectrum see their ideological opponents as threatening, and this threat motivates prejudice (e.g., Brandt et al., 2015; Brandt & Van Tongeren, 2017; Crawford, 2014). These feelings of threat may override any of the tolerance-enhancing qualities of the personality traits and individual differences associated with more liberal and progressive ideologies. That is, whereas it may be that people high in Openness are more prone to tolerance, the clash of values may eliminate that predispositional response.

One way to test this possibility is to examine how worldviews, personality, and motivations are related to intergroup bias within the minimal groups paradigm (Diehl, 1990). In this paradigm, the outgroup is not necessarily threatening, at least in terms of not sharing values or threatening safety of the self or others. Initial studies have examined how worldviews (e.g., authoritarianism, social dominance orientation) and personality (e.g., Openness, Empathetic concern) are associated with ingroup bias in the minimal group paradigm, but they do not provide clear evidence that traits associated with progressive worldviews have a predispositional response that reduces bias (Bergh et al., 2016; Reynolds, Turner, Haslam, Ryan, Bizumic, &

Subasic, 2007; Hodson & Sorrentino, 2001). For example, Reynolds and colleagues (2007) found that personality and worldviews were typically unrelated to intergroup bias, except in specific circumstances: authoritarianism was related to more intergroup bias when group choice was seen as voluntary and social dominance orientation was related to more intergroup bias when it reinforced group status. Other circumstances and other traits were not clearly related to intergroup bias. Similarly, Hodson and Sorrentino (2001) found that uncertainty orientation was related to more intergroup bias, but only under conditions of task uncertainty. And finally, the most consistent correlation found by Bergh and colleagues (2016) was a positive association between empathic concern and intergroup bias. That is, people higher on empathic concern, who also tend to adhere to more progressive worldviews (Sidanius et al., 2012), expressed more intergroup bias in the minimal groups paradigm. To us, this inconsistent set of results suggests that liberals and progressive worldviews, as well as their associated traits, are not a wholesale salve on intergroup bias, even when groups are minimally defined.

Open Questions

The results provide clear support for the worldview conflict hypothesis across multiple domains. When it comes to the association between worldviews and prejudice, the worldview conflict hypothesis makes more accurate predictions than the traditional hypothesis. Although the support for the worldview conflict hypothesis is strong, there are still open questions.

Open Question #1: What are the Key Mechanisms?

One key open question is the mechanism (or mechanisms) that contribute to the worldview conflict effect. The worldview conflict hypothesis predicts that people will express prejudice toward individuals and groups who hold dissimilar and conflicting worldviews. This prediction is built on several different research traditions that each suggest other, more specific

mechanisms for why people would be bothered by people who hold differing worldviews. An open question is the degree these more specific mechanisms help account for the worldview conflict effect.

Different Attitudes vs. Different Identities. Is worldview conflict driven by differences in attitudes and values or by differences in group identities? Our work on the worldview conflict hypothesis originally built on research that found that people express prejudice toward groups who are perceived to hold different and conflicting values (Brandt et al., 2014) and tied these perspectives to similarity-liking perspectives that find that people like those who agree with them (Bryne, 1969). Consistent with this framing, we have found that measures of perceived value violations (e.g., Wetherell et al., 2013), symbolic threat (e.g., Crawford, 2014), and perceived attitude and belief dissimilarity (e.g., Brandt et al., 2015; Crawford et al., 2017) are all consistently associated with prejudice and (statistically) mediate the associations between worldviews and prejudice. Affective polarization research (Iyengar et al., 2012), however, is originally built on research on social identity which finds that people tend to support their in-groups and derogate out-groups (Tajfel & Turner, 1979). Consistent with this framing, measures of partisan and ideological identity are associated with prejudice toward partisan and ideological outgroups (Iyengar & Westwood, 2015; Mason, 2018a). This is consistent with the greater centrality of political identifications relative to specific issue content (Boutyline & Vaisey, 2017; Brandt, Sibley, & Osborne, in press; Converse, 1964).

Although these two research areas identified conceptually similar results and make very similar predictions, the precise mechanism is different. A key question is whether it is possible to separate out one's group identity from the values and attitudes associated with that identity? Groups, especially political groups, are not value free. People see groups as embodying different

norms and values, and identifying with a group also entails identifying with those norms and values to some degree. Tajfel (1974), for example, defines the social identity of an individual as the knowledge that he or she, “belongs to certain social groups together with some emotional and value significance” (p. 72) of his or her membership. Here we see that relevant values are part of social identity. It is, of course, possible to identify with a group but not agree with all of its values and positions. Regardless, the overlap in attitudes, values, and identities suggests that studies that only assess politically-relevant identities cannot show evidence for identity over and above value-conflict and attitudinal dissimilarity. Similarly, studies that only assess values and attitudes cannot show evidence of worldview and value conflict over and above identities.

For example, studies on value-conflict and attitudinal dissimilarity are not able to fully rule out identity mechanisms. The original work by Byrne and his colleagues (e.g., Byrne, 1969) finds that liking increases linearly with the proportion of shared attitudes. These studies do not include any assessments or manipulations of political identity suggesting a “pure” attitude effect. However, it’s also possible (and even highly likely) that people infer other people’s political identities from their attitudes. A person learning that their interaction partner is against same-sex marriage, for lower taxes, and for more military spending, might be forgiven if they also assume their interaction partner is a Republican (e.g., Crawford, Jussim, Madon, Cain, & Stevens, 2011). Similarly, when we measure perceived dissimilarity in terms of attitudes and values (e.g., Brandt et al., 2015), it is quite possible people also infer perceived dissimilarity in terms of other identities.

There are some studies that try to tease these different mechanisms apart. One piece of evidence that conflicting attitudes and values might play a role comes from a study by Rogowski and Sutherland (2016). They find that people dislike candidates who are described as having

different political ideologies, and that this effect is stronger for people who have more extreme political ideologies themselves. Moreover, this effect of ideological differences on candidates dislike is substantially reduced when the focus is taken off of ideological differences by including a wealth of biographical information in the candidate description. That is, ideological differences matter, but they matter less when people do not pay attention to them. Other work has found that when people's attitudes on a number of issues align (e.g., they hold the conservative position on all of the issues), they are more likely to express prejudice towards political outgroups (Bougher, 2017; see also Webster & Abramowitz, 2017). This occurs even when political identities are included as covariates and it occurs in different political eras. Combined, these results suggest that attitudinal and value differences, outside of identities, play a role in worldview conflict.

However, other evidence supports an identity mechanism. First, the effect of issues may be particularly limited. Cross-lagged path models revealed that issue alignment (like that studied by Bougher, 2017) is associated with more prejudice towards partisan outgroups over time, but that this is only the case for people with high degrees of political knowledge (Lelkes, 2018). This suggests that although issue differences might play a role, they may only play a role for a subset of the most politically engaged citizens. More directly, ideological identification (i.e., identification as a liberal or a conservative) is associated with prejudice towards ideological outgroups, even when controlling for issue positions, and even for people who hold issue positions that are inconsistent with their ideological identification (e.g., conservatives who lean liberal on issue positions; Mason, 2018a).

This combination of results provide mixed conclusions overall. Moreover, the studies that control for people's positions on policy issues show more of a unique association between

people's political identities and prejudice towards the political outgroup. However, this work just shows that people's political identities are associated with prejudice towards an identity-based outgroup. Targets in these studies are typically described in terms of their political identities (e.g., feeling thermometers for the Republican party or for Liberals). It is not clear if identity is still the most consistent predictor of prejudice toward a group with different attitudes or policy positions (e.g., if the target is anti-abortion, rather than Republican). That is, political identities may be highly correlated with prejudice toward political identity groups because these measures are directly related to one another. If prejudice were assessed as it is expressed toward outgroups based on policy, then attitudes towards specific policies may play the largest role.

Although political identity and conflicting attitudes and values are theoretically different mechanisms, these mechanisms may be highly overlapping and redundant in many cases. Scholars who find this distinction important need to demonstrate the independent roles of political identity and conflicting attitudes and values in contexts where each construct is given a fair test. Earlier research on social identity and belief congruence theories found that identities often won out (for a brief review, see Tajfel, 1982, p. 25); however, these tests were typically not in the domain of worldviews. Perhaps a more compelling demonstration of this distinction is if these different mechanisms provide actionable insight into reducing the expression of prejudice towards political and worldview conflicting outgroups.

Uncertainty Reduction. A more distal mechanism may be the reduction of uncertainty and the resolution of mental-conflict. Following from dissonance theory (Festinger, 1957), a large number of theoretical perspectives in social psychology suggest that people want to avoid uncertainty and inconsistencies (for an integrated review, see Jonas et al., 2014). Feelings of uncertainty are aversive and cause people to feel anxiety and arousal (Proulx, Inzlicht, &

Harmon-Jones, 2012). To mitigate these negative feelings, people use a variety of strategies to reduce that uncertainty, including avoiding the uncertainty, reframing the uncertainty, and bolstering certainty in other life domains (Proulx & Inzlicht, 2012). This latter strategy, in particular, is relevant to prejudice and worldview defense.

People are motivated to maintain a sense of understanding about the world (i.e. a sense of meaning) and uncertainty violates that understanding (Proulx, Inzlicht, & Harmon-Jones, 2012). Identifying with groups, endorsing important attitudes, and bolstering worldviews are methods to deal with uncertainty because they can provide clear and meaningful ways to view the world and see how the world works (Greenberg et al., 1990; Proulx & Heine, 2008; Proulx & Major, 2013; Webber et al., 2018). One's own worldview may not be effective at explaining how the world should and does work when faced with people who hold conflicting worldviews (and their related attitudes and identities). Expressing prejudice can reinforce the worldview and help people maintain certainty.

There are relatively few direct tests of this hypothesis. In one example (Sekerdej, Kossowska, & Czernatowicz-Kukuczka, 2018), a small community sample of religious people from Poland were primed with uncertainty (vs. a control condition) and then the importance of religious perceptions, perceptions of groups violating values, and prejudice were assessed. In a mediation analysis, uncertainty was associated with more prejudice towards both atheists and homosexuals via increases in the importance of religious behaviors and perceived value violations. Another study did not manipulate uncertainty directly, but rather directly exposed a small sample of religious participants to worldview-threatening information (i.e., an atheistic worldview; Kossowska, Szwed, Czernatowicz-Kukuczka, Sekerdej, & Wyczesany, 2017). Following this exposure, participants experienced higher heart rate, an index of threat (e.g.,

Harmon-Jones, Greenberg, Solomon, & Simon, 1996; Robinson & Demaree, 2007), and this higher heart rate was highest among people with more orthodox beliefs. Importantly, the orthodox participants who were given the chance to express their prejudice towards atheists experienced decreased heart rate compared to participants in a control condition, suggesting that the expression of prejudice helps religious participants cope with threat.

The two examples in the prior paragraph are consistent with the idea that feelings of threat and uncertainty underlie worldview conflict effects; however, they are also consistent with the traditional hypothesis because they find that people with a more traditional worldview express prejudice towards groups that violate their values. They do not look at participants who are not religious, for example, and how they express prejudice towards people that violate their values. One study has rectified this limitation (Kossowska, Czernatowicz-Kukuczka, & Sekerdej, 2017). In a small sample, participants first completed measures of intolerance of uncertainty, dogmatic beliefs, and attitudes towards religion. Participants were then invited to the lab where they were primed with uncertainty (vs a control condition) and completed measures of prejudice that violated the values of either religious or non-religious people. The authors first use statistical mediation models and find that general dogmatic beliefs were associated with both religious orthodoxy and dogmatic atheism, and that these beliefs mediated the association between general dogmatic beliefs and prejudice towards value violators (i.e., homosexuals, atheists, pro-life supporters, Catholics). Then, the authors show that this mediation model for both homosexual and for pro-life supporter targets only holds when participants are primed with uncertainty. This suggests that prejudice towards value violators helps people address people's feelings of uncertainty for people with both traditional and non-traditional worldviews.

The work conducted by the Kossowska lab is a promising start for understanding how feelings of threat and uncertainty might underpin the expression of prejudice towards value violating groups. Notably, whether worldview conflict effects are driven more by differences in attitudes versus differences in identities is not relevant for whether or not uncertainty plays a role as both attitudes and identities have been identified as mechanisms for addressing feelings of threat and uncertainty (Hogg, 2007; Proulx & Major, 2013; Sleegers, Proulx, & Van Beest, 2015; Webber et al., 2018). However, this work is just the start for identifying the role of threat and uncertainty. The data, so far, is focused on religious and atheistic worldviews in one country and with relatively small sample sizes. Additional studies with different worldviews, from different countries, and with larger samples will help us understand the extent these processes generalize beyond the contexts of these specific studies.

Open Question #2: Will the Traditional Hypothesis Find Support with Different Measures?

Despite the fact that our findings differ from those in the broader prejudice literature, our approach to construct measurement is very similar. Regarding individual differences, we have used the same measures of Big Five traits (Crawford & Brandt, 2019), cognitive ability (Brandt & Crawford, 2016), ideology (Crawford et al., 2017; Wetherell et al., 2013), and religiosity (Brandt & van Tongeren, 2017) used in the literature (e.g., Brandt & Reyna, 2014; Onraet et al., 2015; Sibley & Duckitt, 2008). Likewise, in measuring prejudice, we have primarily (though not exclusively) relied on feeling thermometer and social distance ratings, which are the most widely used measures of prejudice in the literature (Correll, Judd, Park, & Wittenbrink, 2010). Additionally, we have used other well-accepted prejudice measures such as the IAT (Crawford et al., 2017), positive and negative trait attributions (Crawford et al., 2013), willingness to discriminate (Wetherell et al., 2013), political intolerance (Crawford & Pilanski,

2014), and discrimination in dictator games (Crawford et al., 2017). The advantage of these measures is that they can be tailored to any type of target group, and can be easily administered.

That said, these are usually single-item (or sometimes three-item, in the case of social distance) assessments of each group (unless feeling thermometer and social distance ratings are averaged together, which is sometimes the case; e.g., Crawford et al., 2017). One trend in the broader literature not yet adopted within the worldview conflict literature is the use of multi-item batteries assessing attitudes toward a particular group (e.g., anti-gay attitudes, LaMar & Kite, 1998; anti-Black attitudes, McConahay, 1983). Such multi-item measures may be more reliable, and often attempt to capture multiple dimensions of attitudes (e.g., stereotypes, negative affect, emotional arousal) that are more difficult to accomplish for a heterogeneous array of target groups. To be fair, we have employed such approaches when randomly assigning participants to only one of several targets with varying political orientations (e.g., Crawford et al., 2017, Study 5), and we often include measures of different types of threats that may uniquely predict prejudice towards certain groups (e.g., realistic threat, rights threat; Brandt & Van Tongeren, 2017; Crawford, 2014). But, we may be missing some nuances of the predictors of prejudice toward heterogeneous arrays of groups by using more efficient prejudice measures.

A related possibility is that different emotions underlie prejudice for different ideological groups and this could have consequences for how prejudice is translated into behavior. Emotions have different behavioral consequences (Mackie & Smith, 2018; Mackie, Maimor, & Smith, 2009; Zeelenberg, Nelissen, & Breugelmans, 2008). For example, if anger underlies prejudice for some groups, but fear underlies prejudice for other groups, the outcomes could differ. Anger typically inspires a more aggressive response, whereas fear may inspire more of an avoidance response. Similarly, hatred, disgust, and envy may lead to different actions, such

as elimination, purification, and the leveling of group differences, respectively. Importantly, different groups have different norms about the appropriate emotions to express and to feel (Gao, Chen, & Li, 2016; Leonard, Moons, Mackie, & Smith, 2011), something that likely extends to groups defined by worldviews (cf. Cohen, Pliskin, & Halperin, 2019; Hasson Tamir, Brahms, Cohrs, & Halperin, 2018). Furthermore, depending on the precise constellation of stereotypes and appraisals, people feel different emotions towards different groups (Cuddy, Fiske, & Glick, 2007). If people with different worldviews experience different emotions due to their own group norms and the particular groups they feel prejudice towards, the consequences of prejudice may be different depending on one's worldview. At this stage, it is unclear if these different emotional processes contribute to different outcomes for people from different worldviews. In the one study we have collected data on intergroup emotions (Crawford et al., 2017, Study 5), we find symmetrical expressions of ideological outgroup bias on a general negative emotions factor (e.g., anger, disgust, resentment), but no effects on a secondary factor of negative emotions (e.g., envy, fear).

It may also be the case that whereas there are similarities between worldviews when it comes to expressing prejudice, the differences between worldviews emerge in other ways. For example, perhaps people high in Openness are more likely to reconsider their negative impressions of people from conventional groups? Or perhaps people low on fundamentalism are more likely to tolerate working with religious fundamentalists despite their negative impressions of these groups? Such patterns of results would lend some credence to the traditional hypothesis and could be used to build a more nuanced understanding of the link between worldviews, worldview conflict, and prejudice. However, until such effects are identified and replicated we

believe that the most parsimonious model is the model underlying the worldview conflict hypothesis.

Open Question #3: How Can We Reduce Worldview Conflict?

For nearly as long as social psychologists have studied the nature of prejudice, they have studied how to reduce it (Allport, 1954). Probably the best known and most well-regarded area of prejudice and conflict reduction research has been in the intergroup contact tradition. As Pettigrew and Tropp (2006) show, positive intergroup contact can reduce prejudice. Of course, certain parameters that support positive intergroup contact (e.g., equal status, cooperation, shared goals) are difficult to achieve in political conflict as polarized as current U.S. politics is (Lelkes, 2016). Moreover, bias reduction strategies that have worked in other domains, like self-affirmation, do not work to reduce partisan conflict in the U.S. (Levendusky, 2018b). Indeed, levels of political polarization in the U.S. suggest that research on resolving intractable conflicts (e.g., between Israelis and Palestinians) may be a useful model for approach political conflict.

Work by Halperin and colleagues has focused on the role of emotion in intractable conflicts. Specifically, this work advances the idea that changing the way that people appraise outgroups or conflicts can alter the emotional responses to those targets, and ultimately, attitudes toward those targets (e.g., Gross, Halperin, & Porat, 2013). For instance, Halperin and Gross (2011) found that Israeli Jews' tolerance of Palestinians increased (and their negative emotions decreased) following a reappraisal intervention that asked participants to take a detached, neutral, scientific perspective to the conflict. Goldenberg, Cohen-Chen, Goyer, Dweck, Gross, and Halperin (2018) provide longitudinal evidence that encouraging people to think of groups as malleable improves intergroup attitudes and increases hope for the resolution of conflict.

Goldenberg et al.'s (2018) intervention was found to be as effective (or in some instances, more effective) than another common approach toward conflict resolution—perspective taking (Bilali & Vollhardt, 2013), in which participants are encouraged to take the vantage point of the target group or its individual members. For instance, Kalla and Broockman (2016) find that interacting with door-to-door canvassers who encourage perspective-taking and active processing of the issue can increase positive attitudes toward transgender people, with effects lasting as long as three months. Interestingly, they find no difference between transgender and non-transgender canvassers in encouraging positive intergroup attitudes. While this finding may be inconsistent with the contact hypothesis, it suggests that allied non-group members can successfully advocate on behalf of targeted groups (which is especially effective for targeted groups in a numerical minority; Paluck, 2016).

For American political polarization and worldview conflict more generally, this research has a few implications. From a worldview conflict perspective, if dissimilarity is one of the primary driving forces for conflict, a reappraisal perspective would suggest encouraging participants to detach from the feelings that dissimilarity and disagreement inspire. From a perspective-taking perspective (ahem), partisans might be encouraged to try to understand someone else's reasons or motives for their political beliefs, rather than their presumed reasons. At this writing, evidence for any of these processes in this context are sparse, and should be an area of future inquiry. Work that targets political disagreement has had mixed results. Eschert and Simon (2019) find that inducing a feeling of respect from one's outgroup can improve attitudes toward groups with dissimilar beliefs, and it might be possible to do this by including worldview-dissimilar others in political conversation (Voelkel, Ren, & Brandt, 2019). While some evidence suggests that pointing out people's lack of understanding of policies leads them to

take less extreme positions on those policies (Fernbach, Rogers, Fox, & Sloman, 2013), this work has failed to directly replicate (Crawford, 2019), and does not extend to improved intergroup attitudes (Crawford, 2019; Voelkel, Brandt, & Colombo, 2018).

One approach that does have both promise and evidentiary value is based on the common ingroup identity model (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993). This work finds that encouraging conflicting groups (e.g., Whites and Blacks) to consider common, shared, superordinate social identities (e.g., Americans) can improve intergroup attitudes. This approach has proved successful for reducing partisan biases (Levendusky, 2018a). In three experiments using large samples of Americans, Levendusky (2018a) found that priming people with an American identity increased positive feelings and positive trait attributions towards the out-party. This effect was consistent across both strong and weak partisans. Outside the experimental context, this same paper reported field studies that found that Americans expressed more positive attitudes about the out-party's candidates closer to the July 4th holiday or to the 2008 Summer Olympics, naturally occurring primes of American identity. Similarly, immediately following the execution of Osama bin Laden, partisans were more likely to trust one another (Carlin & Love, 2018). These results suggest that a common ingroup identity may help reduce worldview conflict, but additional tests are needed to see if this extends beyond partisan's perceptions of the outparty.

Of course, one must consider whether improved feelings toward outgroups, or normalization and tolerance, are the goals. For example, improving intergroup relations may reduce motivation to address societal issues, such as inequality (Dovidio, Gaertner, Ufkes, Saguy, & Pearson, 2016). Similarly, reducing worldview conflict may increase tolerance for otherwise abhorrent views. Moreover, changing attitudes might not be the most relevant target of

intervention. Paluck (2009) suggests that changing beliefs about social norms of tolerance and acceptable intergroup behavior may be more important to focus on than changes in feelings towards outgroups *per se*.

Is All Worldview Conflict Morally Equivalent?

Sometimes, descriptive research can appear as if it is proscriptive. Indeed, as some have argued (Duarte et al., 2015; Tetlock, 1994), this has likely been the case for the long history of the social psychology of prejudice—that social psychologists have sought to understand the roots of prejudice towards groups for whom they believed prejudice and discrimination were unwarranted.

Our descriptive research is not proscriptive. We find that people with different worldviews are equally likely to express prejudice and discriminatory intentions towards dissimilar groups. However, we do not argue that all prejudices are equally bad or that they have the same moral weight. It is quite possible that prejudices directed toward unconventional groups, low status groups, and historically disadvantaged groups causes more harm to those groups or to society more broadly. The social capital and financial resources of high status and conventional groups may offset the effects of prejudice directed at these groups, just as perceived social support appears to buffer the negative effects of stigma (e.g., Beals, Peplau, & Gable, 2009). In this way, our work suggests that although there is a psychological equivalence between different worldviews when it comes to prejudice, this psychological equivalence is not the same, nor does it imply, moral equivalence (see also Ditto et al., 2019b).

Systematic explorations of the disparate consequences of prejudice directed at lower vs. higher status targets are lacking. However, there is some evidence that there are more victims of right-wing hate groups than left-wing hate groups (Badaan, 2019). More indirectly, despite some

people's belief that high status groups (Whites) are now more often victims of discrimination than low status groups (Berman, 2019; Norton & Sommers, 2011), the extent of racial, income, and gender inequalities are stubbornly large (Bialik & Cilluffo, 2017; Piketty, Saez, & Zucman, 2017; Richeson & Sommers, 2016). This suggests that the prejudice directed at high status and more conventional groups does not have the same societal impact as prejudice directed at low status and more unconventional groups. Given that people see harm and immorality as linked (Schein & Gray, 2018), we would make the more normative claim that prejudice directed at low status and unconventional groups is more immoral than prejudice directed at high status and conventional groups.

Thus, studying psychological equivalences of worldview conflict across groups does not mean that one will conclude that all prejudices are morally equivalent (e.g., if prejudice towards low status groups is more prevalent, or disproportionately harmful to physical or mental health, than prejudice towards high status groups). Moreover, learning the origins of prejudice towards high status and conventional groups may be applicable for promoting other causes that some people likely consider moral. For example, we know that prejudice towards low status and unconventional groups is related to policies that disproportionately harm those groups and their interests (e.g., Federico & Sidanius, 2002; Herek, 2011). Similarly, prejudice towards high status and conventional groups may motivate policy changes aimed at increasing equality and reducing the dominance of various conventional groups in cultural discourse. That is, understanding the equivalent psychological processes linking different worldviews to prejudice may provide avenues for understanding how to motivate social change on behalf of low status groups.

How Does Worldview Conflict Fit into Broader Research on Ideological (As)Symmetries?

Our research on worldview conflict is one piece of a broader debate within social and political psychology regarding ideological symmetries and asymmetries. Broadly speaking, this is a question of the psychological similarities and differences between liberals and conservatives. Most scholars agree that liberals and conservatives differ in the content of their beliefs. They hold onto different values, they support different political issues, and they find different things worthy of their moral concern (e.g., Feldman, 2003; Schwartz, Caprara, & Vecchione, 2010). These differences cut to the core of what it means to be liberal or conservative and these differences are the differences necessary to find that liberals and conservatives find different sets of groups worldview violating. Differences in content, then, are not part of the larger debate about ideological symmetries and asymmetries.

What is up for debate is the extent that liberals and conservatives differ in terms of other types of psychological processes and the extent these differences can be observed in other domains. For example, Jost (2017) argues that ideological asymmetry is the cornerstone of political psychology, and he reviews meta-analytic evidence for ideological asymmetries in existential and epistemic motivations (e.g., Jost et al., 2003, 2017).⁴ It does make sense that different beliefs will have different psychological functions, leading to some of the asymmetries identified by the field. And so, for our discussion here we take as a given that there are ideological differences in existential and epistemic motivations.

From our perspective, the symmetry vs. asymmetry debate centers primarily around the outcomes that result from these psychological differences. In regards to prejudice, several psychological models posit that the individual differences and motivations associated with

⁴ Although there have been challenges to the robustness of these conclusions for both methodological (Malka et al., 2017) and theoretical reasons (Eadeh & Chang, in press; Malka & Soto, 2015), for our discussion here we put these aside.

conservatism (e.g., low cognitive ability, low Openness, disgust sensitivity, dogmatism) incline people toward negative intergroup attitudes (e.g., Duckitt, 2001; Hodson & Dhont, 2015).

However, as we have reviewed, this is not the case. Rather than finding increased intergroup biases among conservatives and people with traditional worldviews, we instead find similar intergroup biases among both liberals and conservatives. This might lend credence to the idea that these individual difference differences are not reliable (Malka et al., 2017), or it may suggest the individual differences that divide liberals and conservatives do not necessarily bleed through to have impacts on the expression of prejudice. That is, individual differences may be the causes of worldviews, but that the consequences of worldviews, such as the motivation to defend the worldviews, are the consequences (cf. Brandt, Wetherell, & Reyna, 2014). Although there are asymmetries in the causes, the consequences may be more psychologically symmetrical.

The finding that individual difference variables do not necessarily bleed through to have an impact on expressions of prejudice also emerges in other domains. For instance, some suggest that because needs for closure, certainty, and structure undergird political conservatism, conservatives should be more prone to biased reasoning and selective exposure (e.g., Nam, Jost, & Van Bavel, 2013). The evidence for this is quite mixed, however; while some studies provide evidence of asymmetry, others provide evidence of symmetry (e.g., studies included in Ditto et al., 2019). Capturing the complexities of the debate, there are large-scale social media studies showing that conservatives are more likely to selective expose on Twitter (Barbera et al., 2015) and that liberals are more likely to selectively expose on Facebook (Bakshy, Messing, & Adamic, 2015). A recent meta-analysis of the biased assimilation literature suggested no differences in biased assimilation between liberals and conservatives (Ditto et al., 2019). One clear possibility is that whereas there might be small but reliable differences between liberals and

conservatives in the types of needs and motives that would be associated with motivated reasoning, these effects are small relative to the larger ideological motives to maintain one's prior beliefs (Ditto et al., 2019, p. 11).

Future research needs to better answer the question as to why we observe ideological differences in certain individual differences and motivations, but we do not reliably find differences in the purported outcomes of those individual differences and motivations. And if these individual differences and motivations cannot be used to make reliable predictions about the expression of prejudice, selective exposure, and biased assimilation, then they appear to tell us little about differences in ideological and political behaviors and attitudes of much consequence.

Conclusion

We build on Allport's (1954) legacy of studying the nature of prejudice, including how prejudice is related to worldviews and personality. But rather than studying the nature of prejudice, our work expands the possible targets of prejudice so that we can study the nature of prejudices. We discussed four core findings

1. The link between worldview conflict and prejudice is consistent across worldviews.
2. The link between worldview conflict and prejudice is found across various expressions of prejudice.
3. The link between worldview conflict and prejudice is found in multiple countries.
4. Traits and individual differences historically associated with less prejudice, may in fact also show evidence of worldview conflict.

Together, the findings suggest that the psychological processes underlying prejudice are consistent across worldviews and that these similar processes lead people with different worldviews to express prejudice towards different groups.

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